

SEQUENCE LISTING

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 Johanna LINDQUIST
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- <120> ANTIBODIES BINDING TO A C-TERMINAL FRAGMENT OF APOLIPOPROTEIN E
- <130> 117-580 / N.90271E

Sergy LEONOV

- <140> US 10/579,445
- <141> 2006-10-04
- <150> PCT/EP2004/013426
- <151> 2004-11-26
- <150> US 60/525,174
- <151> 2003-11-28
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- Val Lys Glu Gln Val Ala Glu Val Arg Ala Lys Leu Glu Glu Gln Ala 20 25 30
- Gln Gln Ile Arg Leu Gln Ala Glu Ala Phe Gln Ala Arg Leu Lys Ser 35 40 45
- Trp Phe Glu Pro Leu Val Glu Asp Met Gln Arg Gln Trp Ala Gly Leu 50 55 60
- Val Glu Lys Val Gln Ala Ala Val Gly Thr Ser Ala Ala Pro Val Pro 65 70 75 80

Ser Asp Asn His

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Gly Thr Ser Ala Ala Pro Val Pro Ser Asp Asn His
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Leu Val Glu Asp Met Gln Arg Gln
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Lys Tyr Ser Met His
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Gly Ile Tyr Ser Ser Gly Gly Lys Thr Ile Tyr Ala Asp Ser Val Lys
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Ser Leu Asp Leu Asp Tyr
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Leu Gln Tyr Asp Ser Phe Pro Tyr Thr
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Asp Ala Ser Lys Arg Ala Thr
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Gln Gln Gly Tyr Asn Trp Pro Pro Trp Thr
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Ser Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
                           40
Ser Gly Ile Tyr Ser Ser Gly Gly Lys Thr Ile Tyr Ala Asp Ser Val
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Pro Lys Asn Thr Leu Tyr
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
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Ser Ser Leu Tyr Pro Ser Gly Gly Asn Thr Ser Tyr Ala Asp Ser Val 50 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Arg Gly Asn Tyr Asp Phe Trp Ser Ala Gly Tyr Tyr Tyr 100 105 110

Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser Ser 115 120 125

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Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Arg Ile Arg Lys
20 25 30

Asn Leu His Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu 35 40 45

Ile Tyr Asp Ala Ser Ser Asn Glu Arg Gly Val Pro Ser Arg Phe Ser
50 55 60

Gly Arg Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Leu Ala Thr Tyr Tyr Cys Gln Gln Ser Phe Ser Ser Pro 85 90 95

Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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His Leu Gly Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Gln Arg Leu 35 40 45

Ile Arg Glu Ala Ser Ile Leu Gln Ser Gly Val Pro Ser Thr Phe Tyr 50 55 60

Gly Ser Gly Tyr Gly Arg Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Ser Phe Pro 85 90 95

Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys 100 105

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Gln Asp Ile Gln Met Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro 1 5 10 15

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Gly Ser 20 25 30

Arg Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu 35 40 45

Leu Ile Tyr Asp Ala Ser Lys Arg Ala Thr Gly Val Pro Val Arg Phe 50 55 60

Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu 65 70 75 80

Gly Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Gly Tyr Asn Trp 85 90 95

Pro Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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Asp Gly Arg Arg Pro His Tyr Gly Ser Gly Arg Trp Ala Tyr
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Arg Tyr Leu Met Met
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Val Ile Ser Pro Ser Gly Gly Arg Thr Trp Tyr Ala Asp Ser Val Lys
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Gly
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Asn Tyr Phe Met Ile
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Glu Ala Gly Tyr
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Ala Tyr Tyr Met Gly
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Gly Pro His Gly Gln Gly Gly Val Asp Ser
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Glu Tyr Phe Met Thr
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Ser Ile Arg Pro Ser Gly Gly Lys Thr Arg Tyr Ala Asp Ser Val Lys
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Val Ser Arg Tyr Tyr Asn Asn Gly Ala Tyr Arg Leu Asp Ala Phe Asp
Ile
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Tyr Ile Ser Ser Ser Gly Gly Val Thr Ser Tyr Ala Asp Ser Val Lys
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Gly Thr His Leu Pro Gly Val Asp Tyr
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Gly Tyr Ile Met Ala
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Gly
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Ser Tyr Pro Met Val
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Gly Ile Trp Ser Ser Gly Gly Leu Thr Tyr Tyr Ala Asp Ser Val Lys
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Tyr Met Asp Val
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Lys Tyr Gln Met Thr
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Val Ile Ser Ser Ser Gly Gly Asp Thr Ala Tyr Ala Asp Ser Val Lys
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Asp Arg Gly Tyr Cys Ser Gly Asn Thr Cys Tyr Ile Asp Ala Phe Asp
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Pro Tyr Trp Met Phe
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Gly
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His Tyr Gly Met Ser
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Ser Ile Arg Ser Ser Gly Gly Arg Thr Trp Tyr Ala Asp Ser Val Lys
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Gly Ser Leu Ser Ser Gly Trp Asp Tyr
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Asn Tyr Arg Met Glu
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Ser Ile Trp Ser Ser Gly Gly Leu Thr Lys Gln Ala Asp Ser Val Lys
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Gly Leu Tyr Arg
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Trp Tyr Leu Met His
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Ser Ile Val Pro Ser Gly Gly Thr Thr Val Tyr Ala Asp Ser Val Lys
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Gly
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Trp Tyr Ser Met Val
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Val Tyr Ser Met Ala
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Gly Ile Trp Pro Ser Gly Gly Pro Thr Ala Tyr Ala Asp Ser Val Lys
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Glu Asp Phe Trp Ser Gly Leu Glu Asp Val
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Ser Gly Ser Ser Ser Asn Ile Gly Ser Glu Tyr Val Tyr
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Arg Asn Asp Gln Arg Pro Ser
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Ala Ala Trp Asp Asp Ser Leu Pro Gly Trp Cys
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10

5

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Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Thr Val Asn
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Asn Asn Asn Gln Arg Pro Ser
1 5
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Ala Ala Trp His Asp Gly Leu Asn Gly Pro Val
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Lys Ala Ser Gln Ser Val Arg Ala Phe Ile Ala
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Gly Ala Ser Asn Arg Ala Thr
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Gln Gln Tyr Gly Ser Ser Arg Tyr Thr
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Met Gln Ala Leu Gln Thr Pro Thr
1 5
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Gln Gln Tyr Ala Gly His Pro Ile Thr
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Thr Gly Ala Thr Arg Asp Val Ser
1 5
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Tyr Glu Val Ser Ser Arg Pro Ser
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Ser Ser Thr Thr Ser Arg Ala Pro Arg Val Val
              5
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Arg Ser Ser Gln Ser Leu Met His Arg Asn Gly His His Phe Phe Asp
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Trp Ala Ser Asn Arg Ala Pro
1 5
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Met Gln Ala Leu Gln Thr Pro Tyr Thr
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Gln Ala Ser Gln Asn Ile Asp Asn Tyr Leu Asn
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Ala Ala Ser Ser Leu Gln Ser
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Ala Ala Trp Asp Asp Ser Leu Asn Ala Trp Val
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Leu Gly Ser Asn Arg Ala Ser
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Arg Ala Ser Gln Ser Ile Ser Arg Trp Leu Ala
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Ala Ala Ser Ser Leu Gln Ser
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Gln Gln Ser Tyr Ser Thr Pro Leu Thr
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<213> Homo sapiens
<400> 124
Gln Asp Arg Lys Arg Pro Ser
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<210> 125
<211> 9
<212> PRT
<213> Homo sapiens
<400> 125
Gln Ser Trp Asp Ser Ser Ser Val Ile
                5
<210> 126
<211> 11
<212> PRT
<213> Homo sapiens
<400> 126
Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
                5
<210> 127
<211> 7
<212> PRT
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<400> 127
Ala Ala Ser Ser Leu Gln Ser
<210> 128
<211> 9
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<213> Homo sapiens
<400> 128
Gln Gln Ala Asn Ser Phe Pro Leu Thr
<210> 129
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<211> 14

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<212> PRT
<213> Homo sapiens
<400> 129
Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr Asn Tyr Val Ser
                                   10
<210> 130
<211> 7
<212> PRT
<213> Homo sapiens
<400> 130
Glu Val Asn Lys Arg Pro Ser
<210> 131
<211> 10
<212> PRT
<213> Homo sapiens
<400> 131
Ser Ser Tyr Ala Gly Arg Asn Phe Val Val
               5
<210> 132
<211> 11
<212> PRT
<213> Homo sapiens
<400> 132
Gly Gly Asn Asn Ile Gly Thr Lys Ile Val Asn
<210> 133
<211> 7
<212> PRT
<213> Homo sapiens
<400> 133
Asp Asn Ser Asp Arg Pro Ser
<210> 134
<211> 11
<212> PRT
<213> Homo sapiens
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<400> 134

Gln Leu Trp Asp Ser Ser Ser Asp His Pro Ile 1 5 10

<210> 135

<211> 123

<212> PRT

<213> Homo sapiens

<400> 135

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Phe Tyr
20 25 30

Gly Met Val Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ser Ile Ser Pro Ser Gly Gly Tyr Thr Leu Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Lys Asp Gly Arg Arg Pro His Tyr Gly Ser Gly Arg Trp Ala Tyr 100 105 110

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser 115 120

<210> 136

<211> 118

<212> PRT

<213> Homo sapiens

<400> 136

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Tyr
20 25 30

Leu Met Met Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Val Ile Ser Pro Ser Gly Gly Arg Thr Trp Tyr Ala Asp Ser Val 50 55 60 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Val Arg Ser Ile Ala Ala Ala Gly Thr Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser 115

<210> 137

<211> 113

<212> PRT

<213> Homo sapiens

<400> 137

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Tyr 20 25 30

Phe Met Ile Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Ser Trp Ile Ser Pro Ser Gly Gly Thr Thr Gln Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Glu Ala Gly Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser

Ser

<210> 138

<211> 119

<212> PRT

<213> Homo sapiens

<400> 138

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ala Tyr 20 25 30

Tyr Met Gly Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Val Ile Arg Pro Ser Gly Gly Lys Thr Lys Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Gly Pro His Gly Gln Gly Gly Val Asp Ser Trp Gly Gln Gly
100 105 110

Thr Leu Val Thr Val Ser Ser 115

<210> 139

<211> 126

<212> PRT

<213> Homo sapiens

<400> 139

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Glu Tyr 20 25 30

Phe Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Ser Ser Ile Arg Pro Ser Gly Gly Lys Thr Arg Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Val Ser Arg Tyr Tyr Asn Asn Gly Ala Tyr Arg Leu Asp Ala 100 105 110

Phe Asp Ile Trp Gly Pro Gly Thr Val Val Thr Val Ser Ser 115 120 125

<210> 140

<211> 118

<212> PRT

<213> Homo sapiens

<400> 140

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ala Tyr
20 25 30

Arg Met Ala Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Ser Tyr Ile Ser Ser Ser Gly Gly Val Thr Ser Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Lys Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Thr His Leu Pro Gly Val Asp Tyr Trp Gly Gln Gly Thr 100 105 110

Leu Val Thr Val Ser Ser 115

<210> 141

<211> 113

<212> PRT

<213> Homo sapiens

<400> 141

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Gly Tyr
20 25 30

Ile Met Ala Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 . 45

Ser Gly Ile Gly Ser Ser Gly Gly Leu Thr Ala Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Glu Ala Gly Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser

<210> 142

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<211>
      129
<212>
      PRT
<213>
      Homo sapiens
<400> 142
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
Pro Met Val Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
Ser Gly Ile Trp Ser Ser Gly Gly Leu Thr Tyr Tyr Ala Asp Ser Val
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
                                        75
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
Ala Arg Glu Gly Ser Ala Gly Val Val Lys Gly Pro Ala Arg Tyr Tyr
                                105
Tyr Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser
                            120
Ser
<210> 143
<211> 126
<212> PRT
<213> Homo sapiens
<400> 143
Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Lys Tyr
                                25
Gln Met Thr Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
Ser Val Ile Ser Ser Ser Gly Gly Asp Thr Ala Tyr Ala Asp Ser Val
                        55
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Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Arg Gly Tyr Cys Ser Gly Asn Thr Cys Tyr Ile Asp Ala 100 105 110

Phe Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser 115 120 125

<210> 144

<211> 119

<212> PRT

<213> Homo sapiens

<400> 144

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Pro Tyr
20 25 30

Trp Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Val Ser Ser Gly Gly Met Thr Gly Tyr Ala Asp Ser Val 50 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Val Gly Met Ser Thr Tyr Ala Phe Asp Ile Trp Gly Gln Gly
100 105 110

Thr Met Val Thr Val Ser Ser 115

<210> 145

<211> 118

<212> PRT

<213> Homo sapiens

<400> 145

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Leu Gly Gly 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser His Tyr 20 25 30

Gly Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Ser Ser Ile Arg Ser Ser Gly Gly Arg Thr Trp Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Lys Gly Ser Leu Ser Ser Gly Trp Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser 115

<210> 146

<211> 113

<212> PRT

<213> Homo sapiens

<400> 146

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Asn Tyr 20 25 30

Arg Met Glu Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Ser Ser Ile Trp Ser Ser Gly Gly Leu Thr Lys Glu Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Gly Leu Tyr Arg Trp Gly Gln Gly Thr Leu Val Thr Val Ser 100 105 110

Ser

<210> 147

<211> 118

<212> PRT

<213> Homo sapiens

<400> 147

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Trp Tyr 20 25 30

Leu Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ser Ile Val Pro Ser Gly Gly Thr Thr Val Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Asp Leu Trp Phe Gly Glu Trp Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser 115

<210> 148

<211> 122

<212> PRT

<213> Homo sapiens

<400> 148

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Trp Tyr 20 25 30

Ser Met Val Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Ser Ser Ile Gly Pro Ser Gly Gly Met Thr Arg Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Asp Gln Gly Ile Thr Met Val Gln Gly Ala Met Gly Tyr Trp 100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ser 115 120 <210> 149 <211> 119 <212> PRT <213> Homo sapiens <400> 149 Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Val Tyr Ser Met Ala Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Gly Ile Trp Pro Ser Gly Gly Pro Thr Ala Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Glu Asp Phe Trp Ser Gly Leu Glu Asp Val Trp Gly Lys Gly 100 105 Thr Thr Val Thr Val Ser Ser 115 <210> 150 <211> 110 <212> PRT <213> Homo sapiens <400> 150 Gln Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Gly Thr Pro Gly Gln 5 15 Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Glu Tyr Val Tyr Trp Phe Gln Gln Leu Pro Gly Thr Ala Pro Arg Leu Leu 40 Ile Tyr Arg Asn Asp Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln

75

70

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Pro Gly Trp Cys Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 151

<211> 110

<212> PRT

<213> Homo sapiens

<400> 151

Gln Ser Glu Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn 20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Asn Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp His Asp Gly Leu
85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105 110

<210> 152

<211> 108

<212> PRT

<213> Homo sapiens

<400> 152

Gln Asp Ile Gln Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro
1 5 10 15

Gly Glu Arg Ala Thr Leu Ser Cys Lys Ala Ser Gln Ser Val Arg Ala
20 25 30

Phe Ile Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu 35 40 45

Ile Ser Gly Ala Ser Asn Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser 50 55 60

Gly Gly Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu 65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Arg 85 90 95

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 105

<210> 153

<211> 112

<212> PRT

<213> Homo sapiens

<400> 153

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Pro Val Thr Pro 1 5 10 15

Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His
20 25 30

Ser Ser Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln 85 90 95

Ala Leu Gln Thr Pro Thr Phe Gly Gly Gly Thr Lys Val Asp Ile Lys
100 105 110

<210> 154

<211> 108

<212> PRT

<213> Homo sapiens

<400> 154

Gln Asp Ile Gln Met Thr Gln Ser Pro Ala Thr Leu Ser Val Ser Pro 1 5 10 15

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser 20 25 30

Asn Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu 35 40 45

Ile Tyr Gly Ala Ser Thr Arg Ala Thr Gly Val Pro Ala Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Ala Gly His Pro 85 90 95

Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105

<210> 155

<211> 105

<212> PRT

<213> Homo sapiens

<400> 155

Gln Ser Glu Leu Thr Gln Ala Ala Ser Val Ser Gly Ser Pro Gly Gln 1 5 10 15

Ser Ile Thr Leu Ser Cys Thr Gly Ala Thr Arg Asp Val Ser Trp Tyr 20 25 30

Gln Gln His Pro Gly Lys Ala Pro Lys Leu Val Leu Tyr Glu Val Ser 35 40 45

Ser Arg Pro Ser Gly Val Ser Asp Arg Phe Ser Gly Ser Met Ser Gly 50 55 60

Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln Ala Glu Asp Glu Ala 65 70 75 80

Asp Tyr Tyr Cys Ser Ser Thr Thr Ser Arg Ala Pro Arg Val Val Phe 85 90 95

Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 156

<211> 113

<212> PRT

<213> Homo sapiens

<400> 156

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro 1 5 10 15

Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Met His 20 25 30

Arg Asn Gly His His Phe Phe Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Tyr Trp Ala Ser Asn Arg Ala Pro Gly Val 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln 85 90 95

Ala Leu Gln Thr Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile 100 105 110

Lys

<210> 157

<211> 108

<212> PRT

<213> Homo sapiens

<400> 157

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Ile 1 5 10 15

Gly Asp Arg Val Thr Ile Ser Cys Gln Ala Ser Gln Asn Ile Asp Asn 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys 100 105

<210> 158

<211> 110

<212> PRT

<213> Homo sapiens

<400> 158

Gln Ser Glu Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln 1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn 20 25 30

Tyr Val Tyr Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Arg Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Ala Trp Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 159

<211> 112

<212> PRT

<213> Homo sapiens

<400> 159

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro 1 5 10 15

Gly Glu Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu His
20 25 30

Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Ser Leu Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln 85 90 95

Ala Leu Gln Thr Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105 110

<210> 160

<211> 108

<212> PRT

<213> Homo sapiens

<400> 160

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Arg 20 25 30

Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys 100 105

<210> 161

<211> 106

<212> PRT

<213> Homo sapiens

<400> 161

Gln Ser Ala Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 10 15

Thr Ala Ser Ile Thr Cys Ala Gly Asp Glu Leu Gly Asn Lys Tyr Ala 20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Arg Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Leu 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu 100 105

<210> 162

<211> 108

<212> PRT

<213> Homo sapiens

<400> 162

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15 Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Glu Phe Ser Leu Ser Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro 85 90 95

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 163

<211> 110

<212> PRT

<213> Homo sapiens

<400> 163

Gln Tyr Glu Leu Thr Gln Pro Pro Ser Ala Ser Gly Ser Pro Gly Gln
1 5 10 15

Ser Val Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Gly Tyr
20 25 30

Asn Tyr Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Phe 35 40 45

Met Ile Tyr Glu Val Asn Lys Arg Pro Ser Gly Val Pro Asp Arg Phe 50 55 60

Ser Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Val Ser Gly Leu 65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Tyr Ala Gly Arg 85 90 95

Asn Phe Val Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 164

<211> 108

<212> PRT

<213> Homo sapiens

<400> 164

Gln Ser Ala Leu Thr Gln Pro Pro Ser Val Ser Val Ala Pro Gly Gln
1 5 10 15

Thr Ala Arg Ile Thr Cys Gly Gly Asn Asn Ile Gly Thr Lys Ile Val 20 25 30

Asn Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Val Val Val Val Tyr 35 40 45

Asp Asn Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Arg Val Glu Ala Gly 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Leu Trp Asp Ser Ser Ser Asp His
85 90 95

Pro Ile Phe Gly Thr Gly Thr Lys Val Thr Val Leu 100 105

<210> 165

<211> 317

<212> PRT

<213> Homo sapiens

<400> 165

Met Lys Val Leu Trp Ala Ala Leu Leu Val Thr Phe Leu Ala Gly Cys
1 5 10 15

Gln Ala Lys Val Glu Gln Ala Val Glu Thr Glu Pro Glu Pro Glu Leu 20 25 30

Arg Gln Gln Thr Glu Trp Gln Ser Gly Gln Arg Trp Glu Leu Ala Leu 35 40 45

Gly Arg Phe Trp Asp Tyr Leu Arg Trp Val Gln Thr Leu Ser Glu Gln 50 55 60

Val Gln Glu Glu Leu Leu Ser Ser Gln Val Thr Gln Glu Leu Arg Ala 65 70 75 80

Leu Met Asp Glu Thr Met Lys Glu Leu Lys Ala Tyr Lys Ser Glu Leu 85 90 95

Glu Glu Gln Leu Thr Pro Val Ala Glu Glu Thr Arg Ala Arg Leu Ser 100 105 110

Lys Glu Leu Gln Ala Ala Gln Ala Arg Leu Gly Ala Asp Met Glu Asp 115 120 125

Val Arg Gly Arg Leu Val Gln Tyr Arg Gly Glu Val Gln Ala Met Leu 130 135 140

Gly Gln Ser Thr Glu Glu Leu Arg Val Arg Leu Ala Ser His Leu Arg 145 150 155 160 Lys Leu Arg Lys Arg Leu Leu Arg Asp Ala Asp Asp Leu Gln Lys Arg 170 Leu Ala Val Tyr Gln Ala Gly Ala Arg Glu Gly Ala Glu Arg Gly Leu 185 Ser Ala Ile Arg Glu Arg Leu Gly Pro Leu Val Glu Gln Gly Arg Val 200 Arg Ala Ala Thr Val Gly Ser Leu Ala Gly Gln Pro Leu Gln Glu Arg 215 Ala Gln Ala Trp Gly Glu Arg Leu Arg Ala Arg Met Glu Glu Met Gly 230 235 Ser Arg Thr Arg Asp Arg Leu Asp Glu Val Lys Glu Gln Val Ala Glu 245 250 Val Arg Ala Lys Leu Glu Glu Gln Ala Gln Gln Ile Arg Leu Gln Ala Glu Ala Phe Gln Ala Arg Leu Lys Ser Trp Phe Glu Pro Leu Val Glu 280 Asp Met Gln Arg Gln Trp Ala Gly Leu Val Glu Lys Val Gln Ala Ala 290 Val Gly Thr Ser Ala Ala Pro Val Pro Ser Asp Asn His 305 310 <210> 166 <211> 317 <212> PRT <213> Homo sapiens <400> 166 Met Lys Val Leu Trp Ala Ala Leu Leu Val Thr Phe Leu Ala Gly Cys Gln Ala Lys Val Glu Gln Ala Val Glu Thr Glu Pro Glu Pro Glu Leu 20 Arg Gln Gln Thr Glu Trp Gln Ser Gly Gln Arg Trp Glu Leu Ala Leu

Gly Arg Phe Trp Asp Tyr Leu Arg Trp Val Gln Thr Leu Ser Glu Gln

Val Gln Glu Glu Leu Leu Ser Ser Gln Val Thr Gln Glu Leu Arg Ala

Leu Met Asp Glu Thr Met Lys Glu Leu Lys Ala Tyr Lys Ser Glu Leu

55

70

85

65

90

Glu Glu Gln Leu Thr Pro Val Ala Glu Glu Thr Arg Ala Arg Leu Ser 100 105 110

Lys Glu Leu Gln Ala Ala Gln Ala Arg Leu Gly Ala Asp Met Glu Asp 115 120 125

Val Cys Gly Arg Leu Val Gln Tyr Arg Gly Glu Val Gln Ala Met Leu 130 135 140

Gly Gln Ser Thr Glu Glu Leu Arg Val Arg Leu Ala Ser His Leu Arg 145 150 155 160

Lys Leu Arg Lys Arg Leu Leu Arg Asp Ala Asp Asp Leu Gln Lys Arg 165 170 175

Leu Ala Val Tyr Gln Ala Gly Ala Arg Glu Gly Ala Glu Arg Gly Leu 180 185 190

Ser Ala Ile Arg Glu Arg Leu Gly Pro Leu Val Glu Gln Gly Arg Val 195 200 205

Arg Ala Ala Thr Val Gly Ser Leu Ala Gly Gln Pro Leu Gln Glu Arg 210 215 220

Ala Gln Ala Trp Gly Glu Arg Leu Arg Ala Arg Met Glu Glu Met Gly 225 230 235 240

Ser Arg Thr Arg Asp Arg Leu Asp Glu Val Lys Glu Gln Val Ala Glu 245 250 255

Val Arg Ala Lys Leu Glu Glu Gln Ala Gln Gln Ile Arg Leu Gln Ala 260 265 270

Glu Ala Phe Gln Ala Arg Leu Lys Ser Trp Phe Glu Pro Leu Val Glu 275 280 285

Asp Met Gln Arg Gln Trp Ala Gly Leu Val Glu Lys Val Gln Ala Ala 290 295 300

Val Gly Thr Ser Ala Ala Pro Val Pro Ser Asp Asn His 305 310 315

<210> 167

<211> 317

<212> PRT

<213> Homo sapiens

<400> 167

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 Gly Arg Phe Trp Asp Tyr Leu Arg Trp Val Gln Thr Leu Ser Glu Gln 50
- Val Gln Glu Glu Leu Leu Ser Ser Gln Val Thr Gln Glu Leu Arg Ala 65 70 75 80
- Leu Met Asp Glu Thr Met Lys Glu Leu Lys Ala Tyr Lys Ser Glu Leu 85 90 95
- Glu Glu Gln Leu Thr Pro Val Ala Glu Glu Thr Arg Ala Arg Leu Ser 100 105 110
- Lys Glu Leu Gln Ala Ala Gln Ala Arg Leu Gly Ala Asp Met Glu Asp 115 120 125
- Val Cys Gly Arg Leu Val Gln Tyr Arg Gly Glu Val Gln Ala Met Leu 130 135 140
- Gly Gln Ser Thr Glu Glu Leu Arg Val Arg Leu Ala Ser His Leu Arg 145 150 155 160
- Lys Leu Arg Lys Arg Leu Leu Arg Asp Ala Asp Asp Leu Gln Lys Cys 165 170 175
- Leu Ala Val Tyr Gln Ala Gly Ala Arg Glu Gly Ala Glu Arg Gly Leu 180 185 190
- Ser Ala Ile Arg Glu Arg Leu Gly Pro Leu Val Glu Gln Gly Arg Val 195 200 205
- Arg Ala Ala Thr Val Gly Ser Leu Ala Gly Gln Pro Leu Gln Glu Arg 210 215 220
- Ala Gln Ala Trp Gly Glu Arg Leu Arg Ala Arg Met Glu Glu Met Gly 225 230 235 240
- Ser Arg Thr Arg Asp Arg Leu Asp Glu Val Lys Glu Gln Val Ala Glu 245 250 255
- Val Arg Ala Lys Leu Glu Glu Gln Ala Gln Gln Ile Arg Leu Gln Ala 260 265 270
- Glu Ala Phe Gln Ala Arg Leu Lys Ser Trp Phe Glu Pro Leu Val Glu 275 280 285
- Asp Met Gln Arg Gln Trp Ala Gly Leu Val Glu Lys Val Gln Ala Ala 290 295 300
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- <212> PRT
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- Gln Thr Glu Trp Gln Ser Gly Gln Arg Trp Glu Leu Ala Leu Gly Arg
 20 25 30
- Phe Trp Asp Tyr Leu Arg Trp Val Gln Thr Leu Ser Glu Gln Val Gln 35 40 45
- Glu Glu Leu Leu Ser Ser Gln Val Thr Gln Glu Leu Arg Ala Leu Met 50 55 60
- Asp Glu Thr Met Lys Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu 65 70 75 80
- Gln Leu Thr Pro Val Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu 85 90 95
- Leu Gln Ala Ala Gln Ala Arg Leu Gly Ala Asp Met Glu Asp Val Arg
 100 105 110
- Gly Arg Leu Val Gln Tyr Arg Gly Glu Val Gln Ala Met Leu Gly Gln 115 120 125
- Ser Thr Glu Glu Leu Arg Val Arg Leu Ala Ser His Leu Arg Lys Leu 130 135 140
- Arg Lys Arg Leu Leu Arg Asp Ala Asp Asp Leu Gln Lys Arg Leu Ala 145 150 155 160
- Val Tyr Gln Ala Gly Ala Arg Glu Gly Ala Glu Arg Gly Leu Ser Ala 165 170 175
- Ile Arg Glu Arg Leu Gly Pro Leu Val Glu Gln Gly Arg Val Arg Ala 180 185 190
- Ala Thr Val Gly Ser Leu Ala Gly Gln Pro Leu Gln Glu Arg Ala Gln
 195 200 205
- Ala Trp Gly Glu Arg Leu Arg Ala Arg Met Glu Glu Met Gly Ser Arg 210 215 220
- Thr Arg Asp Arg Leu Asp Glu Val Lys Glu Gln Val Ala Glu Val Arg 225 230 235 240
- Ala Lys Leu Glu Glu Gln Ala Gln Gln Ile Arg Leu Gln Ala Glu Ala 245 250 255
- Phe Gln Ala Arg Leu Lys Ser Trp Phe Glu Pro Leu Val Glu Asp Met 260 265 270

Gln Arg Gln Trp Ala Gly Leu Val Glu Lys Val Gln Ala Ala Val Gly 275 280 285

Thr Ser Ala Ala Pro Val Pro Ser Asp Asn His 290 295

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20 25 30

Phe Trp Asp Tyr Leu Arg Trp Val Gln Thr Leu Ser Glu Gln Val Gln 35 40 45

Glu Glu Leu Leu Ser Ser Gln Val Thr Gln Glu Leu Arg Ala Leu Met 50 55 60

Asp Glu Thr Met Lys Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu 65 70 75 80

Gln Leu Thr Pro Val Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu 85 90 95

Leu Gln Ala Ala Gln Ala Arg Leu Gly Ala Asp Met Glu Asp Val Cys
100 105 110

Gly Arg Leu Val Gln Tyr Arg Gly Glu Val Gln Ala Met Leu Gly Gln 115 120 125

Ser Thr Glu Glu Leu Arg Val Arg Leu Ala Ser His Leu Arg Lys Leu 130 135 140

Arg Lys Arg Leu Leu Arg Asp Ala Asp Asp Leu Gln Lys Arg Leu Ala 145 150 155 160

Val Tyr Gln Ala Gly Ala Arg Glu Gly Ala Glu Arg Gly Leu Ser Ala 165 170 175

Ile Arg Glu Arg Leu Gly Pro Leu Val Glu Gln Gly Arg Val Arg Ala 180 185 190

Ala Thr Val Gly Ser Leu Ala Gly Gln Pro Leu Gln Glu Arg Ala Gln
195 200 205

Ala Trp Gly Glu Arg Leu Arg Ala Arg Met Glu Glu Met Gly Ser Arg 210 215 220

Thr Arg Asp Arg Leu Asp Glu Val Lys Glu Gln Val Ala Glu Val Arg 225 230 235 240

Ala Lys Leu Glu Glu Gln Ala Gln Gln Ile Arg Leu Gln Ala Glu Ala
245 250 255

Phe Gln Ala Arg Leu Lys Ser Trp Phe Glu Pro Leu Val Glu Asp Met 260 265 270

Gln Arg Gln Trp Ala Gly Leu Val Glu Lys Val Gln Ala Ala Val Gly
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Thr Ser Ala Ala Pro Val Pro Ser Asp Asn His 290 295

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<213> Homo sapiens

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20 25 30

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Glu Glu Leu Leu Ser Ser Gln Val Thr Gln Glu Leu Arg Ala Leu Met 50 55 60

Asp Glu Thr Met Lys Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu 65 70 75 80

Gln Leu Thr Pro Val Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu 85 90 95

Leu Gln Ala Ala Gln Ala Arg Leu Gly Ala Asp Met Glu Asp Val Cys
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Gly Arg Leu Val Gln Tyr Arg Gly Glu Val Gln Ala Met Leu Gly Gln
115 120 125

Ser Thr Glu Glu Leu Arg Val Arg Leu Ala Ser His Leu Arg Lys Leu 130 135 140

Arg Lys Arg Leu Leu Arg Asp Ala Asp Asp Leu Gln Lys Cys Leu Ala 145 150 155 160

Val Tyr Gln Ala Gly Ala Arg Glu Gly Ala Glu Arg Gly Leu Ser Ala 165 170 175

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Ala Trp Gl 210	y Glu A	Arg Leu	Arg Ala 215	Arg	Met	Glu	Glu 220	Met	.Gly	Ser	Arg	
Thr Arg As 225	p Arg L	Leu Asp 230	Glu Val	Lys	Glu	Gln 235	Val	Ala	Glu	Val	Arg 240	
Ala Lys Le		Glu Gln 245	Ala Glr	Gln	Ile 250	Arg	Leu	Gln	Ala	Glu 255	Ala	
Phe Gln Al	a Arg L 260	Leu Lys	Ser Trp	Phe 265	Glu	Pro	Leu	Val	Glu 270	Asp	Met	
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cctggtaaag		cactttctct ggtttctggt				120 180
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gaccgattct	ctggctccaa	gtctggcacc	tcagcctccc	tggccatcag	tggcctccag	240
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gggaaagccc ctaagctcct gatctatgct gcatccagtt tgcaaagtgg ggtcccatca
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aggttcagtg gcagtggatc tgggacagaa ttctctctct ccatcagcag cctgcagcct
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                                                                    180
cctggtaaag gtttggagtg ggtttcttct atcgttcctt ctggtggcac tactgtttat
gctgactccg ttaaaggtcg cttcactatc tctagagaca actctaagaa tactctctac
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Gly Ile Leu His Asp Tyr
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                            40
Ser Gly Ile Trp Ser Ser Gly Gly Leu Thr Tyr Tyr Ala Asp Ser Val
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55

50

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95 Ala Arg Asp Gly Ser Ala Arg Val Val Lys Gly Pro Arg Arg Tyr Tyr Tyr Tyr Tyr Ile Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser 115 120 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro 130 135 140 <210> 218 <211> 11 <212> PRT <213> Homo sapiens <400> 218 Arg Thr Ser Gln Asp Ile Gly Asn His Leu Ala 5 <210> 219 <211> 11 <212> PRT <213> Homo sapiens <400> 219 Gln Ala Ser Gln Asp Ile Ser Asn Tyr Leu Asn <210> 220 <211> 11 <212> PRT <213> Homo sapiens <400> 220 Arg Ala Ser Gln Asp Ile Tyr Arg Trp Leu Val

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Ser Thr Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
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Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val
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Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
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Ala Leu Gln Thr Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
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Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His
Gly Asn Gly Asn Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
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Ser Pro Gln Leu Leu Ile Tyr Met Gly Ser Asn Arg Ala Ser Gly Val
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
Ala Leu Gln Thr Pro Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
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Arg Ala Ser Gln Asp Ile Arg Asn Asp Leu Gly

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Arg Ala Ser Gln Ser Val Asp Ser Trp Leu Ala
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Gly Ala Ser Ser Leu Gln Ser
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Lys Val Ser Asp Arg Asp Ser
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Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro
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Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His
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Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
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                           40
Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser His Arg Ala Ser Gly Val
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
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Met Gly Ser Asn Arg Ala Ser 1 5

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Ala Ala Ser Lys Leu Gln Ser

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Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His

Ser Thr Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln 85 90 95

Ala Leu Gln Thr Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 105 110

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Gly Ala Ser Thr Val Gln Ser 1 5

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Ala Ala Ser Ser Leu Gln Asn 1 5

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Ala Ala Phe Asn Leu Gln Ser 1 5

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Ala Ala Ser Thr Leu Gln Thr

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His Ala Ser Thr Leu Gln Ser
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Gly Ala Tyr Lys Leu Gln Tyr
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Gly Ala Ser His Leu Gln Ser
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Gly Ala Ser Ser Arg Ala Thr
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Ala Ala Ser Ser Leu Gln Ser 5

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Val Ala Ser Ser Leu Gln Asp

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Met Gln Gly Thr His Trp Pro Pro Thr
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Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser His Arg Ala Ser Gly Val
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Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
65
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Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
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110

Ala Leu Gln Thr Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys

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105

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Gln Gln Tyr Asp Ser Tyr Pro Phe Thr
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Gln Gln Tyr Lys Thr Tyr Pro Phe Thr
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Gln Gln Tyr Glu Ser Tyr Pro Phe Thr
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<213> Homo sapiens

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<400> 280
Gln Gln Tyr Ser Ser Tyr Pro Phe Thr
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Leu Gln His Asn Thr Tyr Pro Leu Thr
<210> 282
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Leu Gln His Asn Ser Tyr Pro Leu Thr
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<211> 9
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<213> Homo sapiens
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Gln Gln Tyr Ala Thr Leu Pro Arg Thr
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<210> 284
<211> 9
<212> PRT
<213> Homo sapiens
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Leu Gln Tyr Asn Ser Tyr Pro Phe Thr
<210> 285
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<212> PRT
<213> Homo sapiens
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<400> 285

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Leu Gln Gln Lys Asn Tyr Pro Leu Thr
<210> 286
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<212> PRT
<213> Homo sapiens
<400> 286
Gln Gln Tyr Lys Ser Phe Pro Phe Thr
<210> 287
<211> 108
<212> PRT
<213> Homo sapiens
<400> 287
Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val
                                    10
Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asn Ile His Thr
                                25
Trp Leu Ala Trp Phe Gln Gln Lys Pro Gly Glu Ala Pro Lys Leu Leu
        35
                            40
Ile Tyr Gly Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln
                                        75
                    70
Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro
Phe Ala Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100
                                105
<210> 288
<211> 113
<212> PRT
<213> Homo sapiens
<400> 288
Gln Asp Ile Val Met Thr Gln Thr Pro Pro Ser Leu Pro Val Asn Pro
Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Ala Ser
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25

20

Ser Asp Gly Asn Met Tyr Leu Asn Trp Phe His Gln Arg Pro Gly Gln 35 40 45

Ser Pro Arg Arg Leu Ile Tyr Lys Val Ser Asp Arg Asp Ser Gly Val 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln 85 90 95

Gly Thr His Trp Pro Pro Thr Phe Gly Pro Gly Thr Lys Val Asp Ile 100 105 110

Lys

<210> 289

<211> 108

<212> PRT

<213> Homo sapiens

<400> 289

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Thr Ser Gln Gly Ile Arg Asn 20 25 30

His Leu Gly Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Gln Arg Leu 35 40 45

Ile Arg Glu Ala Ser Ile Leu Gln Ser Gly Val Pro Ser Thr Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Ser Phe Pro 85 90 95

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 105

<210> 290

<211> 108

<212> PRT

<213> Homo sapiens

<400> 290

Gln Asp Ile Gln Met Thr Gln Ser Pro Pro Ser Leu Ser Ala Ser Val 1 5 10 15 Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Thr Ile Ser Arg 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Thr Ser Thr Leu His Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Gly Leu Gln 65 70 75 80

Pro Glu Asp Ser Ala Thr Tyr Tyr Cys Leu Gln Tyr Asn Asn Tyr Pro 85 90 95

Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 105

<210> 291

<211> 112

<212> PRT

<213> Homo sapiens

<400> 291

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro
1 5 10 15

Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Arg Asn Leu Leu His

Arg Asn Gly Asn Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Tyr Met Gly Ser Asn Arg Ala Ser Gly Val
50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Ala Leu Gln Ala Trp Thr Phe Gly Pro Gly Thr Arg Leu Asp Ile Lys
100 105 110

<210> 292

<211> 108

<212> PRT

<213> Homo sapiens

<400> 292

Gln Asp Ile Gln Met Thr Gln Ser Pro Ala Thr Leu Ser Ala Ser Val $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser His Gly Ile Asn Gly 20 25 30

Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Arg Ala Pro Lys Ser Leu 35 40 45

Ile Tyr Ala Ala Ser Lys Leu Gln Ser Gly Val Pro Ser Lys Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Asn Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Asp Ser Tyr Pro 85 90 95

Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys 100 105

<210> 293

<211> 112

<212> PRT

<213> Homo sapiens

<400> 293

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro
1 5 10 15

Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His 20 25 30

Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Ala Leu Gln Thr Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys 100 105 110

<210> 294

<211> 108

<212> PRT

<213> Homo sapiens

<400> 294

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Thr Ser Gln Asp Ile Gly Asn 20 25 30

His Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Gln Arg Leu 35 40 45

Ile Arg Glu Ala Ser Ile Leu Gln Ser Gly Val Pro Ser Thr Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Ser Tyr Tyr Cys Gln Gln Tyr Asp Ala Phe Pro 85 90 95

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 105

<210> 295

<211> 108

<212> PRT

<213> Homo sapiens

<400> 295

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asp Ile Ser Asn 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Gln Arg Leu
35 40 45

Ile Tyr Gly Ala Ser Thr Val Gln Ser Gly Val Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln 70 75 80

Pro Asp Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Lys Thr Tyr Pro
85 90 95

Phe Thr Phe Gly Gln Gly Thr Arg Leu Asp Ile Lys
100 105

<210> 296

<211> 108

<212> PRT

<213> Homo sapiens

<400> 296

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Tyr Arg
20 25 30

Trp Leu Val Trp Tyr Gln Gln Lys Pro Gly Lys Thr Pro Glu Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Asn Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ala Asn Ser Phe Pro 85 90 95

Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 297

<211> 108

<212> PRT

<213> Homo sapiens

<400> 297

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Phe Asn Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Gly Arg Ser Glu Ala Asp Phe Thr Leu Ala Ile Thr Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Phe Asn Thr Tyr Pro 85 90 95

Phe Thr Phe Gly Gly Gly Thr Lys Val Glu Leu Lys 100 105

<210> 298

<211> 108

<212> PRT

<213> Homo sapiens

<400> 298

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Thr
1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Ser 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asp Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Thr Leu Gln Thr Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asp Ser Tyr Pro
85 90 95

Phe Thr Phe Gly Pro Gly Ser Lys Val Asp Ile Lys
100 105

<210> 299

<211> 108

<212> PRT

<213> Homo sapiens

<400> 299

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Ser Ile 20 25 30

His Leu Ala Trp Phe Gln Lys Lys Pro Gly Lys Ala Pro Lys Ser Leu 35 40 45

Ile Tyr Gly Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Lys Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Glu Ser Tyr Pro 85 90 95

Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys
100 105

<210> 300

<211> 107

<212> PRT

<213> Homo sapiens

<400> 300

Gln Asn Ile Gln Met Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro 1 5 10 15

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Lys Ser Val Ala Ser 20 25 30

Tyr Val Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Arg Leu Leu 35 40 45

Met Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Ala Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu 65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Tyr Asn Pro Tyr 85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 105

<210> 301

<211> 112

<212> PRT

<213> Homo sapiens

<400> 301

Gln Asp Ile Gln Met Thr Gln Ser Pro Asp Ser Leu Pro Val Thr Pro 1 5 10 15

Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His 20 25 30

Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$

Ala Leu Gln Thr Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 100 105 110

<210> 302

<211> 108

<212> PRT

<213> Homo sapiens

<400> 302

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Arg Gly Ile Arg Asn 20 25 30

Asn Leu Ala Trp Tyr Gln His His Pro Gly Lys Ala Pro Lys Arg Leu 35 40 45

Ile Tyr His Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Pro Glu Thr Tyr Pro 85 90 95

Trp Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 303

<211> 112

<212> PRT

<213> Homo sapiens

<400> 303

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His
20 25 30

Ser Ser Gly Tyr His Tyr Leu Asp Trp Tyr Val Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln
85 90 95

Ala Leu Gln Thr Pro Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys 100 105 110

<210> 304

<211> 108

<212> PRT

<213> Homo sapiens

<400> 304

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Thr Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Thr Asn 20 25 30

Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$

Met Tyr Gly Ala Tyr Lys Leu Gln Tyr Gly Val Pro Thr Lys Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Arg Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Gln Thr Tyr Pro 85 90 95

Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Leu Lys
100 105

<210> 305

<211> 108

<212> PRT

<213> Homo sapiens

<400> 305

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Ser Ile Thr Cys Arg Ala Ser Gln Val Ile Gly Asn 20 25 30

Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Lys Arg Leu 35 40 45

Ile Tyr Gly Ala Ser His Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Ser Ser Ile Pro 85 90 95

Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 105

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<210> 306
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<211> 108

<212> PRT

<213> Homo sapiens

<400> 306

Gln Asp Ile Gln Met Thr Gln Ser Pro Ala Thr Leu Ser Met Ser Pro 1 5 10 15

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Lys Met 20 25 30

Asn Leu Ala Trp Tyr Gln His Lys Leu Gly Gln Ala Pro Arg Leu Leu $35 \hspace{1cm} 40 \hspace{1cm} 45$

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu 65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Ala Asn Trp Pro 85 90 95

Phe His Phe Gly Pro Gly Thr Thr Val Asp Ile Lys
100 105

<210> 307

<211> 108

<212> PRT

<213> Homo sapiens

<400> 307

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Ile 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Thr Ile Asn Asn 20 25 30

Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Gln Leu Leu 35 40 45

Ile Tyr Lys Thr Ser Asn Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Val Asp Asp Phe Ala Thr Tyr His Cys Gln Gln Tyr Lys Ala Phe Pro 85 90 95

Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ser Lys 100 105

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<210> 308
<211> 108
<212> PRT
<213> Homo sapiens
<400> 308
Gln Asp Ile Gln Met
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Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ala Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Val Thr Cys Arg Ala Ser Gln Asp Ile Glu Asn 20 25 30

Tyr Leu Ala Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Ser Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Pro Lys Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Tyr Ser Ser Tyr Pro 85 90 95

Phe Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 100 105

<210> 309 <211> 108 <212> PRT <213> Homo sapiens <400> 309

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Ile Cys Arg Ala Ser Gln Asp Ile His Thr
20 25 30

Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Thr Tyr Pro 85 90 95

Leu Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 100 105

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<210> 310
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<211> 108

<212> PRT

<213> Homo sapiens

<400> 310

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Val Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Gly Ile Ser Ser 20 25 30

Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu 35 40 45

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln His Asn Ser Tyr Pro 85 90 95

Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys
100 . 105

<210> 311

<211> 108

<212> PRT

<213> Homo sapiens

<400> 311

Gln Asp Ile Gln Met Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro 1 5 10 15

Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Arg 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Phe
35 40 45

Ile Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Leu Arg Gly Leu Glu 65 70 75 80

Pro Glu Asp Ser Ala Val Tyr Phe Cys Gln Gln Tyr Ala Thr Leu Pro 85 90 95 Arg Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 100 105

<210> 312

<211> 108

<212> PRT

<213> Homo sapiens

<400> 312

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn
20 25 30

Ala Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu 35 40 45

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asn Ser Tyr Pro 85 90 95

Phe Thr Phe Gly Pro Gly Thr Thr Val Asp Ile Lys 100 105

<210> 313

<211> 112

<212> PRT

<213> Homo sapiens

<400> 313

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro 1 5 10 15

Gly Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asn 20 25 30

Ile Asp Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Gln Leu Leu Ile Tyr Phe Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln 85 90 95

Ala Leu Arg Ala Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 100 105 <210> 314 <211> 108 <212> PRT <213> Homo sapiens <400> 314 Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 10 Gly Asp Arg Val Thr Met Thr Cys Arg Ala Ser Gln Asp Ile Arg Asn 20 25 Asp Leu Gly Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Lys Arg Leu Ile Tyr Thr Ala Ser Arg Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 55 Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Gln Lys Asn Tyr Pro Leu Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys 105 <210> 315 <211> 108 <212> PRT <213> Homo sapiens <400> 315 Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Tyr Val 15 5 10 Gly Asp Arg Val Asn Ile Pro Cys Arg Ala Ser Gln Ser Val Asp Ser 25 Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu

Ile Tyr Lys Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser

Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Ser Val Ser Ser Leu Gln

70

75

Pro Asp Asp Phe Val Thr Tyr Tyr Cys Gln Gln Tyr Lys Ser Phe Pro 85 90 95

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 316

<211> 128

<212> PRT

<213> Homo sapiens

<400> 316

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Met Tyr 20 25 30

Met Met Asp Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ser Ile Trp Pro Ser Gly Gly Gln Thr Trp Tyr Ala Asp Ser Val 50 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65. 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Val Leu His Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr 100 105 110

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro 115 120 125

<210> 317

<211> 115

<212> PRT

<213> Homo sapiens

<400> 317

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Met Tyr 20 25 30

Met Met Asp Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Ser Ile Trp Pro Ser Gly Gly Gln Thr Trp Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 90 95 Ala Arg Gly Ile Leu His Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr 100 105 Val Ser Ser 115 <210> 318 <211> 115 <212> PRT <213> Homo sapiens <400> 318 Glu Val Gln Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Gly 10 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Met Tyr Met Met Asp Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 Ser Ser Ile Trp Pro Ser Gly Gly Gln Thr Trp Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 75 70 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Val Leu Leu Asp Lys Trp Gly Gln Gly Thr Leu Val Thr 100 105 Val Ser Ser 115 <210> 319 <211> 115 <212> PRT <213> Homo sapiens <400> 319

10

Glu Val Gln Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Gly

5

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Met Tyr
                                25
Met Met Asp Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
                            40
Ser Ser Ile Trp Pro Ser Gly Gly Gln Thr Trp Tyr Ala Asp Ser Val
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
                   70
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                                    90
Ala Arg Gly Val Leu Phe Asp Asn Trp Gly Gln Gly Thr Leu Val Thr
                                105
                                                    110
Val Ser Ser
        115
<210> 320
<211> 9
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<213> Homo sapiens
<400> 320
Ser Ile Ala Ala Asp Arg Thr Asp Tyr
<210> 321
<211> 9
<212> PRT
<213> Homo sapiens
<400> 321
Ser Ile Ala Ala Ser Arg Thr Asp Tyr
<210> 322
<211> 9
<212> PRT
<213> Homo sapiens
<400> 322
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<210> 323 <211> 9

Ser Ile Ala Ser Ala Gly Thr Asp His

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<212> PRT
<213> Homo sapiens
<400> 323
Ser Ile Ala Ser Ala Arg Thr Asp Ser
<210> 324
<211> 112
<212> PRT
<213> Homo sapiens
<400> 324
Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro
                                   10
Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His
                               25
Ser Asn Gly Asn Thr Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
                            40
Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val
Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
                    70
                                                            80
Ile Ser Arg Val Glu Ala Gly Asp Val Gly Val Tyr Tyr Cys Met Gln
Ala Leu Gln Thr Pro Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
            100
                                105
<210> 325
<211> 13
<212> PRT
<213> Homo sapiens
<400> 325
Ser Gly Ser Ser Ser Asn Ile Gly Ile Asn Thr Val Asn
                5
<210> 326
<211> 13
<212> PRT
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<213> Homo sapiens

<400> 326

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Ser Gly Ser Asn Ser Asn Val Gly Thr Lys Thr Val Asn
<210> 327
<211> 13
<212> PRT
<213> Homo sapiens
<400> 327
Ser Gly Ser Ser Ser Asn Ile Glu Thr Asn Thr Val Asn
               5
<210> 328
<211> 13
<212> PRT
<213> Homo sapiens
<400> 328
Ser Gly Gly Ser Ser Asn Ile Gly Ser Asn Thr Val Asn
<210> 329
<211> 13
<212> PRT
<213> Homo sapiens
<400> 329
Ser Gly Ser Ser Ser Asn Ile Gly Ser Lys Thr Val Asn
               5
<210> 330
<211> 13
<212> PRT
<213> Homo sapiens
<400> 330
Ser Gly Ser Asn Ser Asn Ile Gly Ser Lys Thr Val Asn
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<212> PRT
<213> Homo sapiens
<400> 331
Ser Gly Ser Ser Ser Asn Ile Gly Thr Asn Asn Val Asn
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<211> 112
<212> PRT
<213> Homo sapiens
<400> 332
Gln Asp Ile Val Met Thr Gln Thr Pro Pro Ser Leu Pro Val Asn Pro
Gly Glu Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu His
Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
       35
Ser Pro Gln Leu Leu Ile Ser Leu Gly Ser Asn Arg Ala Ser Gly Val
Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys
            . 70
Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
Ala Leu Gln Thr Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
            100
<210> 333
<211> 7
<212>
     PRT
<213> Homo sapiens
<400> 333
Ser Asn Asn Gln Arg Pro Ser
<210> 334
<211> 7
<212> PRT
<213> Homo sapiens
<400> 334
Ser Asn Thr Gln Arg Pro Ser
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<210> 335 <211> 7 <212> PRT

<213> Homo sapiens

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75

45

40

105

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<400> 335
Ser Asp Asp Gln Arg Pro Ser
<210> 336
<211> 7
<212> PRT
<213> Homo sapiens
<400> 336
Asn Ser Ser Gln Arg Pro Ser
1 5
<210> 337
<211> 7
<212> PRT
<213> Homo sapiens
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Asn Asn Ile Gln Arg Pro Ser
<210> 338
<211> 7
<212> PRT
<213> Homo sapiens
<400> 338
Met Asn Tyr Glu Arg Pro Ser
<210> 339
<211> 7
<212> PRT
<213> Homo sapiens
<400> 339
Ser His His Arg Arg Pro Ser
    5
<210> 340
<211> 112
<212> PRT
<213> Homo sapiens
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<400> 340

Gln Asp Ile Val Met Thr Gln Thr Pro Pro Ser Leu Pro Val Asn Pro $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gly Glu Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu His
20 25 30

Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Ser Leu Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 65 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Ala Leu Gln Thr Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 100 105 110

<210> 341

<211> 11

<212> PRT

<213> Homo sapiens

<400> 341

Ala Ala Trp Asp Asp Ser Leu Asn Gly Pro Val

<210> 342

<211> 11

<212> PRT

<213> Homo sapiens

<400> 342

Ala Ala Trp Asp Asp Ser Leu Asn Gly Pro Leu 1 5 10

<210> 343

<211> 11

<212> PRT

<213> Homo sapiens

<400> 343

Ala Ala Trp Asp Asp Ser Leu Ser Gly Pro Val 1 5 10

<210> 344

```
<211> 112
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<212> PRT

<213> Homo sapiens

<400> 344

Gln Asp Ile Val Met Thr Gln Thr Pro Pro Ser Leu Pro Val Asn Pro 1 5 10 15

Gly Glu Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu His
20 25 30

Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Ser Leu Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Ala Leu Gln Thr Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105 110

<210> 345

<211> 110

<212> PRT

<213> Homo sapiens

<400> 345

Gln Ser Glu Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn 20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

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<210> 346
<211> 110
<212> PRT
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<213> Homo sapiens

<400> 346

Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln 1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ile Asn 20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 347

<211> 110

<212> PRT

<213> Homo sapiens

<400> 347

Gln Ser Val Leu Thr Gln Ser Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Asn Ser Asn Val Gly Thr Lys 20 25 30

Thr Val Asn Trp Tyr Gln Val Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ser Asn Thr Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Arg Val Thr Val Leu 100 105 110

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<210> 348 <211> 110
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<212> PRT

<213> Homo sapiens

<400> 348

Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln 1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn 20 . 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 349

<211> 112

<212> PRT

<213> Homo sapiens

<400> 349

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro 1 5 10 15

Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His 20 25 30

Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln 85 90 95

Ala Leu Gln Ala Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 100 105 110

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<210> 350
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<211> 110

<212> PRT

<213> Homo sapiens

<400> 350

Gln Ser Ala Leu Thr Gln Ser Pro Ser Ala Ser Gly Thr Pro Gly Gln 1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Asn Ser Asn Val Gly Thr Lys
20 25 30

Thr Val Asn Trp Tyr Gln Val Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Arg Val Thr Val Leu 100 105 110

<210> 351

<211> 110

<212> PRT

<213> Homo sapiens

<400> 351

Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln 1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Glu Thr Asn 20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95 Ash Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 <210> 352 <211> 110 <212> PRT <213> Homo sapiens <400> 352 Gln Tyr Glu Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln 10 Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 70 Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 <210> 353 <211> 112 <212> PRT <213> Homo sapiens <400> 353 Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro 10 Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His 25 Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 65 Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln

90

85

Ala Leu Gln Thr Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 100 105 <210> 354 <211> 110 <212> PRT <213> Homo sapiens <400> 354 Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln 10 Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn 20 25 30 Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 55 Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 105 <210> 355 <211> 110 <212> PRT <213> Homo sapiens <400> 355 Gln Ser Glu Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln 5 15 Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ile Asn 25 Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 40 Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln

75

70

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 356

<211> 117

<212> PRT

<213> Homo sapiens

<400> 356

Gln Tyr Glu Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn 20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ser Asp Asp Gln Arg Pro Ser Gly Val Pro Asp Arg Pro Ser
50 55 60

Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly Thr Ser Ala Ser 65 70 75 80

Leu Ala Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Asp Tyr Tyr Cys
85 90 95

Ala Ala Trp Asp Asp Ser Leu Asn Gly Pro Val Phe Gly Gly Gly Thr 100 105 110

Lys Leu Thr Val Leu 115

<210> 357

<211> 110

<212> PRT

<213> Homo sapiens

<400> 357

Gln Tyr Glu Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ile Asn 20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 358

<211> 110

<212> PRT

<213> Homo sapiens

<400> 358

Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Glu Thr Asn 20 25 * 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 359

<211> 123

<212> PRT

<213> Homo sapiens

<400> 359

Phe Tyr Ser His Ser Ala Gln Tyr Glu Leu Thr Gln Pro Pro Ser Ala
1 10 15

Ala Gly Thr Pro Gly Gln Arg Val Thr Ile Ser Cys Ser Gly Gly Ser

Ser Asn Ile Gly Ser Asn Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly 35 40 45

Thr Ala Pro Lys Leu Leu Ile Tyr Asn Ser Ser Gln Arg Pro Ser Gly 50 55 60

Val Pro Asp Arg Phe Ser Gly Ser Arg Ser Gly Thr Ser Ala Ser Leu

Ala Ile Ser Gly Leu Gln Ser Gln Asp Glu Ala Asp Tyr Tyr Cys Ala 85 90 95

Ala Trp Asp Asp Ser Leu Asn Gly Pro Leu Phe Gly Gly Gly Thr Lys
100 105 110

Leu Thr Val Leu Gly Gln Pro Lys Ala Ala Pro 115 120

<210> 360

<211> 110

<212> PRT

<213> Homo sapiens

<400> 360

Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln 1 5 10 15

Ser Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Lys
20 25 30

Thr Val Asn Trp Tyr Gln Gln Phe Pro Arg Ala Ala Pro Lys Leu Leu 35 40 45

Ile His Asn Asn Ile Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Asp Asp Glu Gly Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 361

<211> 110

<212> PRT

<213> Homo sapiens

<400> 361

Gln Ser Ala Leu Thr Gln Pro Pro Ser Thr Ser Gly Thr Pro Gly Gln 1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Asn Ser Asn Ile Gly Ser Lys
20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Met Asn Tyr Glu Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Ser Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 362

<211> 110

<212> PRT

<213> Homo sapiens

<400> 362

Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
1 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ile Asn 20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 363

<211> 110

<212> PRT

<213> Homo sapiens

<400> 363

Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ala Gly Thr Pro Gly Gln $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Arg Val Thr Ile Ser Cys Ser Gly Gly Ser Ser Asn Ile Gly Ser Asn 20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Asn Ser Ser Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Arg Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Gln Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Leu Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105 110

<210> 364

<211> 112

<212> PRT

<213> Homo sapiens

<400> 364

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro 1 5 10 15

Gly Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asn 20 25 30

Ile Asp Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln 85 90 95

Ala Leu Arg Ala Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105 110

<210> 365

<211> 112

<212> PRT

<213> Homo sapiens

<400> 365

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His
20 25 30

Arg Asn Gly Tyr Asn Phe Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
35 40 45

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln 85 90 95

Ala Leu Gln Ser Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105 110

<210> 366

<211> 110

<212> PRT

<213> Homo sapiens

<400> 366

Gln Ser Ala Leu Thr Gln Pro Pro Ser Ala Ser Gln Thr Pro Gly Gln 1 5 10 15

Thr Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Thr Asn 20 25 30

Asn Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Ser Ser His His Arg Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Ala Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 367

<211> 112

<212> PRT

<213> Homo sapiens

<400> 367

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu His
20 25 30

Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val 50 60

Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Ala Leu Gln Ser Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 100 105 110

<210> 368

<211> 110

<212> PRT

<213> Homo sapiens

<400> 368

Gln Ser Glu Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln 1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Glu Thr Asn 20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 369

<211> 131

<212> PRT

<213> Homo sapiens

<400> 369

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Tyr Leu Met Met Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Val Ile Ser Pro Ser Gly Gly Arg Thr Trp Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Val Arg Ser Ile Ala Ala Asp Arg Thr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro 130 <210> 370 <211> 131 <212> PRT <213> Homo sapiens <400> 370 Glu Val Gln Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Gly 10 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Tyr Leu Met Met Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 Ser Val Ile Ser Pro Ser Gly Gly Arg Thr Trp Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 85

Val Arg Ser Ile Ala Ser Ala Gly Thr Asp His Trp Gly Gln Gly Thr 105

100

Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro 115 120 Leu Ala Pro 130 <210> 371 <211> 131 <212> PRT <213> Homo sapiens <400> 371 Glu Val Gln Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Tyr Leu Met Met Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Val Ile Ser Pro Ser Gly Gly Arg Thr Trp Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 90 Val Arg Ser Ile Ala Ser Ala Arg Thr Asp Ser Trp Gly Gln Gly Thr 105 Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro 115 120 125 Leu Ala Pro 130 <210> 372 <211> 131 <212> PRT <213> Homo sapiens <400> 372 Glu Val Gln Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Gly 10 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Tyr

Leu Met Met Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Val Ile Ser Pro Ser Gly Gly Arg Thr Trp Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 70 75 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 90 Val Arg Ser Ile Ala Ala Ser Arg Thr Asp Tyr Trp Gly Gln Gly Thr 100 105 Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro 120 Leu Ala Pro 130 <210> 373 <211> 20 <212> PRT <213> Homo sapiens <400> 373 Glu Arg Ser Val Ala Val Phe Lys Ala Arg Pro Arg His Tyr Tyr Tyr 10 Tyr Met Asp Val 20 <210> 374 <211> 20 <212> PRT <213> Homo sapiens <400> 374 Asp Gly Ser Ala Arg Val Val Lys Gly Pro Arg Arg Tyr Tyr Tyr Tyr 5 10 15 Tyr Ile Asp Val <210> 375 <211> 20 <212> PRT <213> Homo sapiens <400> 375

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Glu Gly Ser Ala Arg Val Val Lys Gly Pro Ala Arg Tyr Phe Tyr Tyr

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Tyr Met Asp Leu
  20
<210> 376
<211> 20
<212> PRT
<213> Homo sapiens
<400> 376
Glu Gly Ser Ser Gly Val Val Lys Gly Pro Ala Arg Tyr Tyr Tyr
Tyr Met Asp Ala
           20
<210> 377
<211> 9
<212> PRT
<213> Homo sapiens
<400> 377
Gln Gln Thr Tyr Ser Thr Pro Arg Thr
              5
<210> 378
<211> 9
<212> PRT
<213> Homo sapiens
<400> 378
Gln Gln Ser Tyr Ser Thr Pro Arg Thr
<210> 379
<211> 9
<212> PRT
<213> Homo sapiens
<400> 379
Gln Gln Ser Asn Ser Ile Pro Arg Thr
               5
<210> 380
<211> 9
<212> PRT
<213> Homo sapiens
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<400> 380
Gln Gln Ser Tyr Thr Thr Pro Arg Thr
<210> 381
<211> 7
<212> PRT
<213> Homo sapiens
<400> 381
Ala Ala Ser Asn Leu Gln Ser
<210> 382
<211> 7
<212> PRT
<213> Homo sapiens
<400> 382
Ala Ala Ser Ser Leu Gln Ser
<210> 383
<211> 7
<212> PRT
<213> Homo sapiens
<400> 383
Ala Ala Tyr Thr Leu Gln Ser
<210> 384
<211> 7
<212> PRT
<213> Homo sapiens
<400> 384
Ser Ala Ser Ser Leu Gln Ser
               5
<210> 385
<211> 7
<212> PRT
<213> Homo sapiens
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<400> 385

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Asp Ala Ser Thr Leu Gln Asn
<210> 386
<211> 7
<212> PRT
<213> Homo sapiens
<400> 386
Ala Ala Ser Thr Leu Gln Ser
               5
<210> 387
<211> 7
<212> PRT
<213> Homo sapiens
<400> 387
Gly Ala Ser Ser Leu Gln Ser
<210> 388
<211> 11
<212> PRT
<213> Homo sapiens
<400> 388
Arg Ala Ser Gln Thr Ile Lys Asn Tyr Leu Asn
<210> 389
<211> 11
<212> PRT
<213> Homo sapiens
<400> 389
Arg Ala Ser Gln Ser Ile Ser Ser Tyr Leu Asn
<210> 390
<211> 11
<212> PRT
<213> Homo sapiens
<400> 390
Arg Ala Ser Gln Ser Ile Ser Arg Tyr Leu Asn
```

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<210> 391
<211> 11
<212> PRT
<213> Homo sapiens
<400> 391
Arg Ala Ser Arg Gly Val Ser Thr Ser Leu Asn
               5
<210> 392
<211> 11
<212> PRT
<213> Homo sapiens
<400> 392
Arg Ala Ser Gln Thr Ile Ser Lys Asn Leu Asn
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Arg Ala Ser Arg Arg Ile Gly Thr Tyr Leu Asn
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Arg Ala Ser Gln Ser Ile Arg Ser Tyr Leu Asn
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Arg Ala Ser Gln Thr Ile Asn Ser Tyr Leu Asn
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Arg Ala Ser Gln Ser Ile Asn Arg Trp Leu Ala
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Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
Pro Met Val Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
        35
                            40
Ser Gly Ile Trp Ser Ser Gly Gly Leu Thr Tyr Tyr Ala Asp Ser Val
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
                    70
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
                85
                                    90
Ala Arg Glu Arg Ser Val Ala Val Phe Lys Ala Arg Pro Arg His Tyr
                                105
Tyr Tyr Tyr Met Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser
        115
Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
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<400> 398

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Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Pro Met Val Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Ser Gly Ile Trp Ser Ser Gly Gly Leu Thr Tyr Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Asp Gly Ser Ala Arg Val Val Lys Gly Pro Arg Arg Tyr Tyr 100 105 110

Tyr Tyr Tyr Ile Asp Val Trp Gly Lys Gly Thr Thr Val Thr Val Ser 115 120 125

Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro 130 135 140

<210> 399

<211> 142

<212> PRT

<213> Homo sapiens

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Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr 20 25 30

Pro Met Val Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ser Gly Ile Trp Ser Ser Gly Gly Leu Thr Tyr Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Glu Gly Ser Ser Gly Val Val Lys Gly Pro Ala Arg Tyr Tyr
100 105 110

Tyr Tyr Tyr Met Asp Ala Trp Gly Lys Gly Thr Thr Val Thr Val Ser 115 120 125 Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro 135 <210> 400 <211> 108 <212> PRT <213> Homo sapiens <400> 400 Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Val Ser Val 10 Gly Asp Arg Val Ile Ile Thr Cys Arg Ala Ser Gln Thr Ile Lys Asn 25 Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 40 Ile Tyr Ala Ala Ser Asn Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 55 Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 70 75 Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Thr Tyr Ser Thr Pro Arg Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 105 <210> 401 <211> 108 <212> PRT <213> Homo sapiens <400> 401 Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Ser Ala Ser Val 10 Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30 Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 55 Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 70 65 Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro

90

85

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 402

<211> 108

<212> PRT

<213> Homo sapiens

<400> 402

Gln Asp Ile Gln Met Thr Gln Ser Pro Ala Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Arg
20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Tyr Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Arg Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Asn Ser Ile Pro
85 90 95

Arg Thr Phe Gly Gln Gly Thr Thr Val Glu Ile Arg

<210> 403

<211> 108

<212> PRT

<213> Homo sapiens

<400> 403

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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<210> 404

<211> 108

<212> PRT

<213> Homo sapiens

<400> 404

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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<210> 405

<211> 108

<212> PRT

<213> Homo sapiens

<400> 405

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro
85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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<210> 406

<211> 108

<212> PRT

<213> Homo sapiens

<400> 406

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Arg Gly Val Ser Thr
20 25 30

Ser Leu Asn Trp Tyr Gln Ile Lys Pro Glu Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ala Ile Thr Ser Leu Gln 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro
85 90 95

Arg Thr Phe Gly Pro Gly Thr Lys Val Glu Ile Lys
100 105

<210> 407

<211> 108

<212> PRT

<213> Homo sapiens

<400> 407

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 408

<211> 108

<212> PRT

<213> Homo sapiens

<400> 408

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Thr Ile Ser Lys
20 25 30

Asn Leu Asn Trp Tyr Gln Gln Lys Pro Gly Ser Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ser Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Gly Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Thr Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Glu
100 105

<210> 409

<211> 108

<212> PRT

<213> Homo sapiens

<400> 409

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro
85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 105

<210> 410

<211> 108

<212> PRT

<213> Homo sapiens

<400> 410

Gln Asp Ile Gln Met Thr Gln Ser Pro Asp Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro
85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 411

<211> 108

<212> PRT

<213> Homo sapiens

<400> 411

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro
85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 412

<211> 108

<212> PRT

<213> Homo sapiens

<400> 412

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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<210> 413

<211> 108

<212> PRT

<213> Homo sapiens

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Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys 100 105

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<211> 108

<212> PRT

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Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys 100 105

<210> 415

<211> 108

<212> PRT

<213> Homo sapiens

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Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
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<211> 108

<212> PRT

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<400> 416

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 417

<211> 108

<212> PRT

<213> Homo sapiens

<400> 417

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Thr Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Arg Arg Ile Gly Thr 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Ala Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Asp Ala Ser Thr Leu Gln Asn Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Thr Glu Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Val Ala Thr Tyr Phe Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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<210> 418

<211> 108

<212> PRT

<213> Homo sapiens

<400> 418

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Arg Ser 20 25 30

Tyr Leu Asn Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Thr Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 419

<211> 108

<212> PRT

<213> Homo sapiens

<400> 419

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15 Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 420

<211> 108

<212> PRT

<213> Homo sapiens

<400> 420

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Thr Ile Asn Ser 20 25 30

Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asp Leu Leu 35 40 45

Ile Phe Gly Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Thr Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Thr Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105

<210> 421

<211> 108

<212> PRT

<213> Homo sapiens

<400> 421

Gln Asp Ile Gln Met Thr Gln Ser Pro Ser Thr Leu Ser Ala Ser Val 1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Asn Arg 20 25 30

Trp Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Asn Leu Leu 35 40 45

Ile Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln 65 70 75 80

Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro 85 90 95

Arg Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
100 105

<210> 422

<211> 11

<212> PRT

<213> Homo sapiens

<400> 422

Ala Gly Asp Glu Leu Gly Asn Lys Tyr Ala Ser 1 5 10

<210> 423

<211> 11

<212> PRT

<213> Homo sapiens

<400> 423

Ser Gly Asp Ile Leu Gly Asn Lys Tyr Ser Ser 1 5 10

<210> 424

<211> 11

<212> PRT

<213> Homo sapiens

<400> 424

Ser Gly Asp Lys Leu Arg Asn Lys Tyr Ala Ser 1 5 10

<210> 425

<211> 11

<212> PRT

<213> Homo sapiens

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Ser Gly Asn Lys Leu Gly Asn Thr Tyr Ile Ser
             5
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<211> 14
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<213> Homo sapiens
<400> 426
Thr Gly Thr Gly Ser Asp Val Gly Arg Tyr Ser His Val Ser
                                  10
<210> 427
<211> 13
<212> PRT
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Ser Gly Gly Ser Ser Asn Ile Gly Leu Asn Pro Val Asn
<210> 428
<211> 11
<212> PRT
<213> Homo sapiens
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Ser Gly Asp Lys Leu Gly Ser Lys Tyr Thr Ser
<210> 429
<211> 11
<212> PRT
<213> Homo sapiens
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Ser Gly Gln Ile Leu Gly Glu Arg Ser Ala Ser
<210> 430
<211> 14
<212> PRT
<213> Homo sapiens
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Thr Gly Thr Ser Ser Asp Val Gly Arg Tyr Asn Arg Val Ser
<210> 431
<211> 11
<212> PRT
<213> Homo sapiens
<400> 431
Ser Gly Asp Thr Leu Arg Asn Lys Tyr Ala Ser
<210> 432
<211> 13
<212> PRT
<213> Homo sapiens
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Ser Gly Ser Ser Ser Asn Ile Gly Gly Asn Thr Val Asn
1 5
<210> 433
<211> 11
<212> PRT
<213> Homo sapiens
<400> 433
Ser Gly Asp Lys Leu Arg Asn Lys Tyr Gly Ser
1 5
<210> 434
<211> 7
<212> PRT
<213> Homo sapiens
<400> 434
Gln Asp Arg Lys Arg Pro Ser
1 5
<210> 435
<211> 7
<212> PRT
<213> Homo sapiens
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Gln Asp Lys Lys Arg Pro Ser
<210> 436
<211> 7
<212> PRT
<213> Homo sapiens
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Ala Val Thr Asn Arg Pro Ser
<210> 437
<211> 7
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Ser Asn Asn Gln Arg Pro Ser
<210> 438
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Gln Asn Arg Lys Arg Pro Ser
<210> 439
<211> 112
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Gln Asp Ile Val Met Thr Gln Thr Pro Pro Ser Leu Pro Val Asn Pro
Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Arg His
                              25
Asn Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
       35
Ser Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val
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Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln 90 Ala Leu Gln Ala Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 105 <210> 440 <211> 7 <212> PRT <213> Homo sapiens <400> 440 Gln Ser Ser Gln Arg Pro Ser 5 <210> 441 <211> 7 <212> PRT <213> Homo sapiens <400> 441 Glu Val Ser Asn Arg Pro Ser 5 <210> 442 <211> 112 <212> PRT <213> Homo sapiens <400> 442 Gln Asp Ile Val Met Thr Gln Thr Pro Pro Ser Leu Pro Val Asn Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Leu Asn 25 Ile Asp Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 40 Ser Pro Gln Leu Leu Ile Tyr Phe Gly Ser Asn Arg Ala Ser Gly Val 50 Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Glu Phe Thr Leu Lys

90

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln

85

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Arg Asn Asn Gln Arg Pro Ser
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Gln Ser Trp Asp Ser Ser Ser Val Ile
<210> 445
<211> 9
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Gln Ala Trp Asp Ser Ser Ser Val Ile
<210> 446
<211> 9
<212> PRT
<213> Homo sapiens
<400> 446
Gln Thr Trp Asp Ser Ser Ser Val Ile
<210> 447
<211> 9
<212> PRT
<213> Homo sapiens
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Gln Thr Trp Asp Arg Ser Ser Val Val
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Ala Leu Arg Ala Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys

105

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<213> Homo sapiens
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Gln Ser Tyr Thr Thr Gly Thr Leu Ile
<210> 449
<211> 9
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Ser Ser Tyr Thr Asn Ser Ser Val Ile
<210> 450
<211> 9
<212> PRT
<213> Homo sapiens
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Gln Ala Trp Asp Asn Ser Ala Val Ile
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<211> 8
<212> PRT
<213> Homo sapiens
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Gln Thr Trp Asp Thr Ser Ile Leu
<210> 452
<211> 9
<212> PRT
<213> Homo sapiens
<400> 452
Ser Ser Tyr Arg Asn Thr Gly Pro Leu
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<210> 453
<211> 17
<212> PRT
<213> Homo sapiens
<400> 453
Ser Ile Trp Ser Ser Gly Gly Leu Thr Lys Glu Ala Asp Ser Val Lys
                                   10
Gly
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<211> 10
<212> PRT
<213> Homo sapiens
<400> 454
Asn Ser Tyr Thr Asn Ser Ala Thr Leu Val
<210> 455
<211> 119
<212> PRT
<213> Homo sapiens
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Phe Tyr Ser His Ser Ala Gln Ser Ala Leu Thr Gln Pro Pro Ser Val
Ser Val Ser Pro Gly Gln Thr Ala Ser Ile Thr Cys Ala Gly Asp Glu
Leu Gly Asn Lys Tyr Ala Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser
       35
Pro Val Leu Val Ile Tyr Gln Asp Arg Lys Arg Pro Ser Gly Ile Pro
Glu Arg Phe Ser Gly Ser His Ser Gly Asn Thr Ala Thr Leu Thr Ile
                   70
                                       75
Ser Gly Thr Gln Ala Leu Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Trp
               85
Asp Ser Ser Val Ile Phe Gly Gly Gly Thr Lys Val Thr Val Leu
                               105
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Ser Gln Pro Lys Ala Ala Pro

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<210> 456
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<211> 106

<212> PRT

<213> Homo sapiens

<400> 456

Gln Ser Ala Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Ser Ile Thr Cys Ser Gly Asp Ile Leu Gly Asn Lys Tyr Ser 20 25 30

Ser Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Lys Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu
100 105

<210> 457

<211> 106

<212> PRT

<213> Homo sapiens

<400> 457

Gln Ser Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Thr Ala Ser Ile Thr Cys Ser Gly Asp Lys Leu Arg Asn Lys Tyr Ala 20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Arg Lys Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser 50 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Thr Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu 100 105

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<210> 458
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<211> 106

<212> PRT

<213> Homo sapiens

<400> 458

Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln 1 5 10 15

Thr Ala Ser Ile Thr Cys Ser Gly Asp Ile Leu Gly Asn Lys Tyr Ser 20 25 30

Ser Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Lys Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu
100 105

<210> 459

<211> 106

<212> PRT

<213> Homo sapiens

<400> 459

Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln 1 5 10 15

Thr Ala Thr Ile Thr Cys Ser Gly Asn Lys Leu Gly Asn Thr Tyr Ile 20 25 30

Ser Trp Tyr Gln Lys Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Lys Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Thr Gly Thr Gln Ser Leu 65 70 75 80

Asp Glu Ser Asp Tyr Tyr Cys Gln Thr Trp Asp Arg Ser Ser Val Val 85 90 95

Phe Gly Gly Thr Lys Leu Thr Val Leu 100 <210> 460 <211> 119 <212> PRT <213> Homo sapiens <400> 460 Phe Tyr Ser His Ser Ala Gln Ser Glu Leu Thr Gln Pro Pro Ser Val 10 Ser Val Ser Pro Gly Gln Thr Ala Ser Ile Thr Cys Ser Gly Asp Lys 25 Leu Arg Asn Lys Tyr Ala Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser 40 Pro Val Leu Val Ile Tyr Gln Asp Arg Lys Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser His Ser Gly Asn Thr Ala Thr Leu Thr Ile 70 Ser Gly Thr Gln Ala Met Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp 85 Asp Ser Ser Val Ile Phe Gly Gly Thr Lys Val Thr Val Leu 100 105 Gly Gln Pro Lys Ala Ala Pro 115 <210> 461 <211> 109 <212> PRT <213> Homo sapiens <400> 461 Gln Ser Glu Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln 5 15 Ser Ile Thr Ile Ser Cys Thr Gly Thr Gly Ser Asp Val Gly Arg Tyr Ser His Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu 40 Ile Ile Tyr Ala Val Thr Asn Arg Pro Ser Gly Val Ser Ala Arg Phe

75

Ser Gly Ser Arg Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu

70

Gln Ser Glu Asp Glu Ala Thr Tyr His Cys Gln Ser Tyr Thr Thr Thr 85 90 95

Gly Thr Leu Ile Phe Gly Gly Gly Thr Asn Leu Thr Val 100 105

<210> 462

<211> 106

<212> PRT

<213> Homo sapiens

<400> 462

Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Ile Ile Thr Cys Ser Gly Asp Ile Leu Gly Asn Lys Tyr Ser 20 25 30

Ser Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Val Leu Val Ile Phe 35 40 45

Gln Asp Lys Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu
100 105

<210> 463

<211> 106

<212> PRT

<213> Homo sapiens

<400> 463

Gln Ser Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Thr Ile Thr Cys Ser Gly Asn Lys Leu Gly Asn Thr Tyr Ile 20 25 30

Ser Trp Tyr Gln Lys Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Lys Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Thr Gly Thr Gln Ser Leu 65 70 75 80

Asp Glu Ser Asp Tyr Tyr Cys Gln Thr Trp Asp Arg Ser Ser Val Val 85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 464

<211> 106

<212> PRT

<213> Homo sapiens

<400> 464

Gln Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Thr Ile Thr Cys Ser Gly Asn Lys Leu Gly Asn Thr Tyr Ile
20 25 30

Ser Trp Tyr Gln Lys Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Lys Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Thr Gly Thr Gln Ser Leu 65 70 75 80

Asp Glu Ser Asp Tyr Tyr Cys Gln Thr Trp Asp Arg Ser Ser Val Val 85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 465

<211> 107

<212> PRT

<213> Homo sapiens

<400> 465

Gln Ser Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg
1 5 10 15

Val Thr Ile Ser Cys Ser Gly Gly Ser Ser Asn Ile Gly Leu Asn Pro 20 .25 30

Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile 35 40 45

Tyr Ser Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly 50 55 60

Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln Ala 65 70 75 80

Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Tyr Thr Asn Ser Ser Val 85 90 95

Ile Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 466

<211> 106

<212> PRT

<213> Homo sapiens

<400> 466

Gln Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Thr Ile Thr Cys Ser Gly Asp Lys Leu Gly Ser Lys Tyr Thr 20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Val Tyr 35 40 45

Gln Asn Arg Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Val Ser Gly Thr Gln Ala Ile 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Asn Ser Ala Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 467

<211> 106

<212> PRT

<213> Homo sapiens

<400> 467

Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 10 15

Thr Ala Ser Ile Thr Cys Ser Gly Asp Lys Leu Arg Asn Lys Tyr Ala
20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Arg Lys Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Thr Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu 100 105

<210> 468

<211> 105

<212> PRT

<213> Homo sapiens

<400> 468

Gln Ser Ala Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly His
1 5 10 15

Thr Ala Thr Ile Thr Cys Ser Gly Gln Ile Leu Gly Glu Arg Ser Ala
20 25 30

Ser Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Val Leu Val Leu Tyr 35 40 45

Gln Ser Ser Gln Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

Ile Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Ala Gln Ser Ile 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Thr Trp Asp Thr Ser Ile Leu Phe 85 90 95

Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 469

<211> 109

<212> PRT

<213> Homo sapiens

<400> 469

Gln Ser Ala Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln 1 5 10 15

Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Arg Tyr
20 25 30

Asn Arg Val Ser Trp Tyr Gln Gln Ser Pro Gly Thr Ala Pro Lys Leu 35 40 45

Ile Ile Phe Glu Val Ser Asn Arg Pro Ser Gly Val Pro Asp Arg Phe 50 55 60

Ser Gly Ser Arg Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu 65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Tyr Arg Asn Thr 85 90 95

Gly Pro Leu Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 470

<211> 106

<212> PRT

<213> Homo sapiens

<400> 470

Gln Ser Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Ser Ile Thr Cys Ser Gly Asp Ile Leu Gly Asn Lys Tyr Ser 20 25 30

Ser Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Lys Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu
100 105

<210> 471

<211> 106

<212> PRT

<213> Homo sapiens

<400> 471

Gln Ser Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Thr Ile Thr Cys Ser Gly Asp Lys Leu Gly Ser Lys Tyr Thr 20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Val Tyr 35 40 45

Gln Asn Arg Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Val Ser Gly Thr Gln Ala Ile 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Asn Ser Ala Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 472

<211> 106

<212> PRT

<213> Homo sapiens

<400> 472

Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln 1 5 10 15

Thr Ala Ser Ile Thr Cys Ser Gly Asp Thr Leu Arg Asn Lys Tyr Ala
20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Arg Lys Arg Pro Ser Asn Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Val Met 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu 100 105

<210> 473

<211> 106

<212> PRT

<213> Homo sapiens

<400> 473

Gln Ser Ala Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln 1 5 10 15

Thr Ala Thr Ile Thr Cys Ser Gly Asp Lys Leu Gly Ser Lys Tyr Thr
20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Val Tyr 35 40 45

Gln Asn Arg Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Val Ser Gly Thr Gln Ala Ile
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Asn Ser Ala Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 474

<211> 106

<212> PRT

<213> Homo sapiens

<400> 474

Gln Ser Val Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Thr Ala Thr Ile Thr Cys Ser Gly Asp Lys Leu Gly Ser Lys Tyr Thr
20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Val Tyr 35 40 45

Gln Asn Arg Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Val Ser Gly Thr Gln Ala Ile 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Asn Ser Ala Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 475

<211> 110

<212> PRT

<213> Homo sapiens

<400> 475

Gln Tyr Glu Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1 10 15

Ser Ile Thr Ile Ser Cys Thr Gly Thr Gly Ser Asp Val Gly Arg Tyr Ser His Val Ser Trp Tyr Gln Gln His Pro Gly Lys Ala Pro Lys Leu 40 Ile Ile Tyr Ala Val Thr Asn Arg Pro Ser Gly Val Ser Ala Arg Phe Ser Gly Ser Arg Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln Ser Glu Asp Glu Ala Thr Tyr His Cys Gln Ser Tyr Thr Thr Thr Gly Thr Leu Ile Phe Gly Gly Gly Thr Asn Leu Thr Val Leu <210> 476 <211> 105 <212> PRT <213> Homo sapiens <400> 476 Gln Ser Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly His Thr Ala Thr Ile Thr Cys Ser Gly Gln Ile Leu Gly Glu Arg Ser Ala Ser Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Val Leu Val Leu Tyr 40 Gln Ser Ser Gln Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser Ile Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Ala Gln Ser Ile Asp Glu Ala Asp Tyr Tyr Cys Gln Thr Trp Asp Thr Ser Ile Leu Phe 85 90 Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 477

<211> 106

<212> PRT

<213> Homo sapiens

<400> 477

Gln Ser Ala Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Thr Ala Ser Ile Thr Cys Ser Gly Asp Lys Leu Arg Asn Lys Tyr Ala
20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Arg Lys Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Thr Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu
100 105

<210> 478

<211> 106

<212> PRT

<213> Homo sapiens

<400> 478

Gln Ser Ala Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln 1 5 10 15

Thr Ala Ser Ile Thr Cys Ser Gly Asp Ile Leu Gly Asn Lys Tyr Ser 20 25 30

Ser Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Lys Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu
100 105

<210> 479

<211> 109

<212> PRT

<213> Homo sapiens

<400> 479

Gln Ser Glu Leu Thr Gln Pro Ala Ser Val Ser Gly Ser Pro Gly Gln
1 5 10 15

Ser Ile Thr Ile Ser Cys Thr Gly Thr Ser Ser Asp Val Gly Arg Tyr 20 25 30

Asn Arg Val Ser Trp Tyr Gln Gln Ser Pro Gly Thr Ala Pro Lys Leu 35 40 45

Ile Ile Phe Glu Val Ser Asn Arg Pro Ser Gly Val Pro Asp Arg Phe 50 55 60

Ser Gly Ser Arg Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu 65 70 75 80

Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Ser Ser Tyr Arg Asn Thr 85 90 95

Gly Pro Leu Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 480

<211> 109

<212> PRT

<213> Homo sapiens

<400> 480

Gln Ser Glu Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln 1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Gly Asn 20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Arg Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
50 55 60

Gly Ser Lys Ser Gly Asn Thr Ala Ser Leu Thr Ile Ser Gly Leu Gln 65 70 75 80

Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Asn Ser Tyr Thr Asn Ser Ala 85 90 95

Thr Leu Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 481

<211> 106

<212> PRT

<213> Homo sapiens

<400> 481

Gln Ser Ala Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Ser Ile Thr Cys Ser Gly Asp Ile Leu Gly Asn Lys Tyr Ser 20 25 30

Ser Trp Tyr Gln Gln Arg Pro Gly Gln Ser Pro Leu Leu Val Ile Tyr 35 40 45

Gln Asp Lys Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu
100 105

<210> 482

<211> 106

<212> PRT

<213> Homo sapiens

<400> 482

Gln Ser Ala Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln 1 5 10 15

Thr Ala Thr Ile Thr Cys Ser Gly Asn Lys Leu Gly Asn Thr Tyr Ile
20 25 30

Ser Trp Tyr Gln Lys Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Lys Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Thr Gly Thr Gln Ser Leu 65 70 75 80

Asp Glu Ser Asp Tyr Tyr Cys Gln Thr Trp Asp Arg Ser Ser Val Val 85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 483

<211> 106

<212> PRT

<213> Homo sapiens

<400> 483

Gln Ser Ala Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Ser Ile Thr Cys Ser Gly Asp Lys Leu Arg Asn Lys Tyr Gly
20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Arg Lys Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser 50 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ala Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu
100 105

<210> 484

<211> 106

<212> PRT

<213> Homo sapiens

<400> 484

Gln Ser Ala Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln
1 5 10 15

Thr Ala Ser Ile Thr Cys Ser Gly Asp Lys Leu Arg Asn Lys Tyr Ala
20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Arg Lys Arg Pro Ser Glu Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

His Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Thr Met 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Thr Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Val Thr Val Leu 100 105

<210> 485

<211> 10

<212> PRT

<213> Homo sapiens

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<400> 485
Val Gly Ile Ser Thr Tyr Gly Phe Asp Leu
               5
<210> 486
<211> 10
<212> PRT
<213> Homo sapiens
<400> 486
Val Gly Met Ala Thr Tyr Gly Phe Asp Ile
<210> 487
<211> 10
<212> PRT
<213> Homo sapiens
<400> 487
Val Gly Met Ser Asn Tyr Gly Phe Asp Phe
<210> 488
<211> 10
<212> PRT
<213> Homo sapiens
<400> 488
Val Gly Met Ser Thr Tyr Gly Phe Asp Lys
<210> 489
<211> 10
<212> PRT
<213> Homo sapiens
<400> 489
Val Gly Met Tyr Asn Tyr Gly Phe Asp Ile
<210> 490
<211> 132
<212> PRT
<213> Homo sapiens
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<400> 490

Glu Val Gln Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Pro Tyr 20 Trp Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 40 Ser Gly Ile Val Ser Ser Gly Gly Met Thr Gly Tyr Ala Asp Ser Val 55 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 70 Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 90 Ala Arg Val Gly Met Ala Thr Tyr Gly Phe Asp Ile Trp Gly Gln Gly 105 Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe 115 120 Pro Leu Ala Pro 130 <210> 491 <211> 132 <212> PRT <213> Homo sapiens <400> 491 Glu Val Gln Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Pro Tyr Trp Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Gly Ile Val Ser Ser Gly Gly Met Thr Gly Tyr Ala Asp Ser Val 55 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys

110

Ala Arg Val Gly Met Ser Asn Tyr Gly Phe Asp Phe Trp Gly Gln Gly

105

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Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe
       115
                          120
Pro Leu Ala Pro
   130
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Met Gln Ala Leu Gln Thr Leu Thr
   5
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Met Gln Ala Leu Arg Ala Ile Thr
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Met Gln Ala Leu Gln Ala Ile Thr
        5
<210> 495
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<400> 495
Met Gln Ala Leu Gln Ser Pro Thr
      5
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<400> 496

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Met Gln Ala Leu Gln Ser Ile Thr
<210> 497
<211> 7
<212> PRT
<213> Homo sapiens
<400> 497
Met Gly Ser Asn Arg Ala Ser
   5
<210> 498
<211> 7
<212> PRT
<213> Homo sapiens
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Leu Gly Ser His Arg Ala Ser
<210> 499
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<212> PRT
<213> Homo sapiens
<400> 499
Phe Gly Ser Asn Arg Ala Ser
<210> 500
<211> 132
<212> PRT
<213> Homo sapiens
<400> 500
Glu Val Gln Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Gly
    5
                                 10
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Pro Tyr
           20
                              25
Trp Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
Ser Gly Ile Val Ser Ser Gly Gly Met Thr Gly Tyr Ala Asp Ser Val
   50
                      55
                                         60
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Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 90 Ala Arg Val Gly Ile Ser Thr Tyr Gly Phe Asp Leu Trp Gly Gln Gly 105 Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe 115 120 125 Pro Leu Ala Pro 130 <210> 501 <211> 16 <212> PRT <213> Homo sapiens <400> 501 Arg Ser Ser Gln Ser Leu Leu His Ser Thr Gly Tyr Asn Tyr Leu Asp 5 10 <210> 502 <211> 16 <212> PRT <213> Homo sapiens <400> 502 Arg Ser Ser Gln Ser Leu Leu His Gly Asn Gly Asn Asn Tyr Leu Asp 10 <210> 503 <211> 16 <212> PRT <213> Homo sapiens <400> 503 Arg Ser Ser Gln Ser Leu Leu His Ser Asn Gly Tyr Asn Tyr Leu Asp 10 <210> 504 <211> 16 <212> PRT <213> Homo sapiens

<400> 504

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Arg Ser Ser Gln Ser Leu Leu His Ser Ser Gly Tyr His Tyr Leu Asp
                                    10
<210> 505
<211>
      16
<212> PRT
<213> Homo sapiens
<400> 505
Arg Ser Ser Gln Ser Leu Leu Asn Ile Asp Gly Tyr Asn Tyr Leu Asp
                                    10
<210> 506
<211> 16
<212> PRT
<213> Homo sapiens
<400> 506
Arg Ser Ser Gln Ser Leu Leu His Arg Asn Gly Tyr Asn Phe Leu Asp
                                   10
<210> 507
<211> 16
<212> PRT
<213> Homo sapiens
<400> 507
Arg Ser Ser Gln Ser Leu Arg His Asn Asn Gly Tyr Asn Tyr Leu Asp
                5
<210> 508
<211> 112
<212> PRT
<213> Homo sapiens
<400> 508
Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro
                                    10
Gly Glu Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu His
                               25
Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln
       35
Ser Pro Gln Leu Leu Ile Ser Leu Gly Ser Asn Arg Ala Ser Gly Val
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Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 70 Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala Leu Gln Thr Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys 105 <210> 509 <211> 132 <212> PRT <213> Homo sapiens <400> 509 Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly 15 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Pro Tyr Trp Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val Ser Gly Ile Val Ser Ser Gly Gly Met Thr Gly Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys 90 85 Ala Arg Val Gly Met Ser Thr Tyr Gly Phe Asp Lys Trp Gly Gln Gly 100 Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe 115 120 125 Pro Leu Ala Pro 130 <210> 510 <211> 132 <212> PRT <213> Homo sapiens <400> 510

169

Glu Val Gln Leu Leu Glu Ser Gly Gly Leu Val Gln Pro Gly Gly

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Pro Tyr

25

Trp Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Ser Gly Ile Val Ser Ser Gly Gly Met Thr Gly Tyr Ala Asp Ser Val 50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr 65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Val Gly Met Tyr Asn Tyr Gly Phe Asp Ile Trp Gly Gln Gly
100 105 110

Thr Met Val Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe 115 120 125

Pro Leu Ala Pro 130

<210> 511

<211> 112

<212> PRT

<213> Homo sapiens

<400> 511

Gln Asp Ile Gln Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro 1 5 10 15

Gly Glu Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu His
20 25 30

Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln 35 40 45

Ser Pro Gln Leu Leu Ile Ser Leu Gly Ser Asn Arg Ala Ser Gly Val 50 55 60

Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys 70 75 80

Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln
85 90 95

Ala Leu Gln Thr Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105 110

<210> 512

<211> 6

<212> PRT

<213> Artificial Sequence

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<220>
<223> Consensus amino acid sequence of the CDR3 regions of affinity
       matured clones of 807A-M0028-B02
<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> X = S or G
<220>
<221> MISC_FEATURE
<222>
      (2)..(2)
<223> X = V \text{ or } I
<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> X = L, H or F
<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> X = Y, N or K
<400> 512
Xaa Xaa Leu Xaa Asp Xaa
                5
<210> 513
<211> 9
<212> PRT
<213> Artificial Sequence
<220>
<223> Consensus amino acid sequence of the CDR3 regions of affinity
       matured clones of 807B-M0004-A03
<220>
<221> MISC_FEATURE
<222> (4)..(4)
\langle 223 \rangle X = A or S
<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> X = D, S or A
<220>
<221> MISC_FEATURE
<222>
      (6)..(6)
<223> X = R or G
<220>
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<222> (9)..(9)
<223> X = Y, H or S
<400> 513
Ser Ile Ala Xaa Xaa Xaa Thr Asp Xaa
<210> 514
<211> 20
<212> PRT
<213> Artificial Sequence
<220>
<223> Consensus amino acid sequence of the CDR3 regions of affinity
        matured clones of 807B-M0004-H03
<220>
<221> MISC_FEATURE
<222> (1)..(1)
\langle 223 \rangle X = E or D
<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> X = G or R
<220>
<221> MISC_FEATURE
<222> (4) .. (4)
<223> X = A, S or V
<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> X = G, R or A
<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> X = V \text{ or } F
<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> X = G \text{ or } A
<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> X = P or R
<220>
<221> MISC_FEATURE
<222> (11)..(11)
<223> X = A, P or R
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<220>
<221> MISC_FEATURE
<222> (13)..(13)
<223> X = Y \text{ or } H
<220>
<221> MISC_FEATURE
<222> (14)..(14)
<223> X = Y or F
<220>
<221> misc_feature
<222> (18)..(18)
<223> Xaa can be any naturally occurring amino acid
<220>
<221> MISC_FEATURE
<222>
      (20)..(20)
<223> X = V, L or A
<400> 514
Xaa Xaa Ser Xaa Xaa Val Xaa Lys Xaa Xaa Arg Xaa Xaa Tyr Tyr
                                    10
Tyr Xaa Asp Xaa
            20
<210> 515
<211>
      10
<212>
      PRT
<213> Artificial Sequence
<220>
<223> Consensus amino acid sequence of the CDR3 regions of affinity
       matured clones of 807B-M0009-F06
<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> X = M \text{ or } I
<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> X = S or A
<220>
<221> MISC_FEATURE
<222>
      (5)..(5)
<223> X = T or N
<220>
<221> MISC_FEATURE
<222> (7)..(7)
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<223> X = A \text{ or } G
<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> X = I, L, F or K
<400> 515
Val Gly Xaa Xaa Xaa Tyr Xaa Phe Asp Xaa
<210> 516
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> Consensus amino acid sequence of the CDR3 regions of affinity
       matured clones of 807B-M0009-F06
<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> X = V \text{ or } I
<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> X = L, H or F
<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> X = K, Y or N
<400> 516
Gly Xaa Leu Xaa Asp Xaa
                5
<210> 517
<211> 9
<212>
      PRT
<213> Artificial Sequence
<220>
<223> Consensus amino acid sequence of the CDR3 regions of affinity
       matured clones of 807A-M0004-A03
<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> X = S or A
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<220>
<221> MISC_FEATURE
<222> (5)..(5)
\langle 223 \rangle X = S or A
<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> X = R \text{ or } G
<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> X = H \text{ or } Y
<400> 517
Ser Ile Ala Xaa Xaa Xaa Thr Asp Xaa
                5
<210> 518
<211> 107
<212> PRT
<213> Artificial Sequence
<220>
<223> Amino acid sequence of the VL chains of the Germline-corrected
       antibodies
<400> 518
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
         5
                                   10
Asp Arg Val Thr Ile Thr Cys Arg Thr Ser Gln Asp Ile Arg Asn His
            20
                                25
Leu Gly Trp Phe Gln Gln Lys Pro Gly Lys Ala Pro Gln Arg Leu Ile
Arg Glu Ala Ser Ile Leu Gln Ser Gly Val Pro Ser Thr Phe Tyr Gly
    50
                        55
                                             60
Ser Gly Tyr Gly Arg Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro
65
                    70
                                         75
Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Ser Phe Pro Tyr
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Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 <210> 519 <211> 107 <212> PRT <213> Artificial Sequence <220> <223> Amino acid sequence of the CL chains of the Germline-corrected antibodies <400> 519 Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe 20 Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln 40 Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu 70 Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys 100 105 <210> 520 <211> 107 <212> PRT <213> Artificial Sequence <220> <223> Amino acid sequence of the VL chains of the Germline-corrected antibodies <400> 520 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Arg Thr Ser Gln Asp Ile Arg Asn His 20 Leu Gly Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Arg Leu Ile

45

40

Tyr Glu Ala Ser Ile Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly 50 55 60

Ser Gly Ser Gly Thr Glu Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro 65 70 75 80

Glu Asp Phe Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Ser Phe Pro Tyr 85 90 95

Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 105

<210> 521

<211> 107

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence of the CL chains of the Germline-corrected antibodies

<400> 521

Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Asp Glu 1 5 10 15

Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu Asn Asn Phe 20 25 30

Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn Ala Leu Gln 35 40 45

Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Ser 50 55 60

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu 70 75 80

Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser 85 90 95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys 100 105

<210> 522

<211> 110

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence of the VL chains of the Germline-corrected antibodies

<400> 522

Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln 1 5 10 15

Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn 20 25 30

Thr Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu 35 40 45

Ile Tyr Asn Asn Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser 50 55 60

Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln 65 70 75 80

Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp His Asp Gly Leu 85 90 95

Asn Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105 110

<210> 523

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence of the CL chains of the Germline-corrected antibodies

<400> 523

Gly Gln Pro Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser 1 5 10 15

Glu Glu Leu Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp 20 25 30

Phe Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro 35 40 45

Val Lys Ala Gly Val Glu Thr Thr Pro Ser Lys Gln Ser Asn Asn 50 55 60

Lys Tyr Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys Ser His Lys Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val 90 Glu Lys Thr Val Ala Pro Thr Glu Cys Ser <210> 524 <211> 107 <212> PRT <213> Artificial Sequence <220> <223> Amino acid sequence of the VL chains of the Germline-corrected antibodies <400> 524 Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Gln Ala Ser Gln Asn Ile Asp Asn Tyr 20 Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys Leu Leu Ile 35 40 Tyr Ala Ala Ser Ser Leu Gln Ser Gly Val Pro Ser Arg Phe Ser Gly 50 55 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro 65 70 Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Ser Tyr Ser Thr Pro Arg 85 95 Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys 100 <210> 525 <211> 111

<223> Amino acid sequence of the VL chains of the Germline-corrected

<212> PRT

<220>

<213> Artificial Sequence

antibodies

<400> 525

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu His Ser 20 25 30

Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Leu Gly Ser Asn Arg Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Ala 85 90 95

Leu Gln Thr Ile Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys
100 105 110

<210> 526

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence of the VL chains of the Germline-corrected antibodies

<400> 526

Ser Tyr Glu Leu Thr Gln Pro Pro Ser Val Ser Val Ser Pro Gly Gln 1 5 10 15

Thr Ala Ser Ile Thr Cys Ala Gly Asp Glu Leu Gly Asn Lys Tyr Ala 20 25 30

Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Val Leu Val Ile Tyr 35 40 45

Gln Asp Arg Lys Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser Gly Ser 50 55 60

Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Ser Gly Thr Gln Ala Met 65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gln Ser Trp Asp Ser Ser Ser Val Ile 85 90 95

Phe Gly Gly Gly Thr Lys Leu Thr Val Leu 100 105

<210> 527

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence of the CL chains of the Germline-corrected antibodies

<400> 527

Gly Gln Pro Lys Ala Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser 1 5 10 15

Glu Glu Leu Gln Ala Asn Lys Ala Thr Leu Val Cys Leu Ile Ser Asp 20 25 30

Phe Tyr Pro Gly Ala Val Thr Val Ala Trp Lys Ala Asp Ser Ser Pro 35 40 45

Val Lys Ala Gly Val Glu Thr Thr Thr Pro Ser Lys Gln Ser Asn Asn 50 55 60

Lys Tyr Ala Ala Ser Ser Tyr Leu Ser Leu Thr Pro Glu Gln Trp Lys 70 75 80

Ser His Arg Ser Tyr Ser Cys Gln Val Thr His Glu Gly Ser Thr Val 85 90 95

Glu Lys Thr Val Ala Pro Thr Glu Cys Ser 100 105